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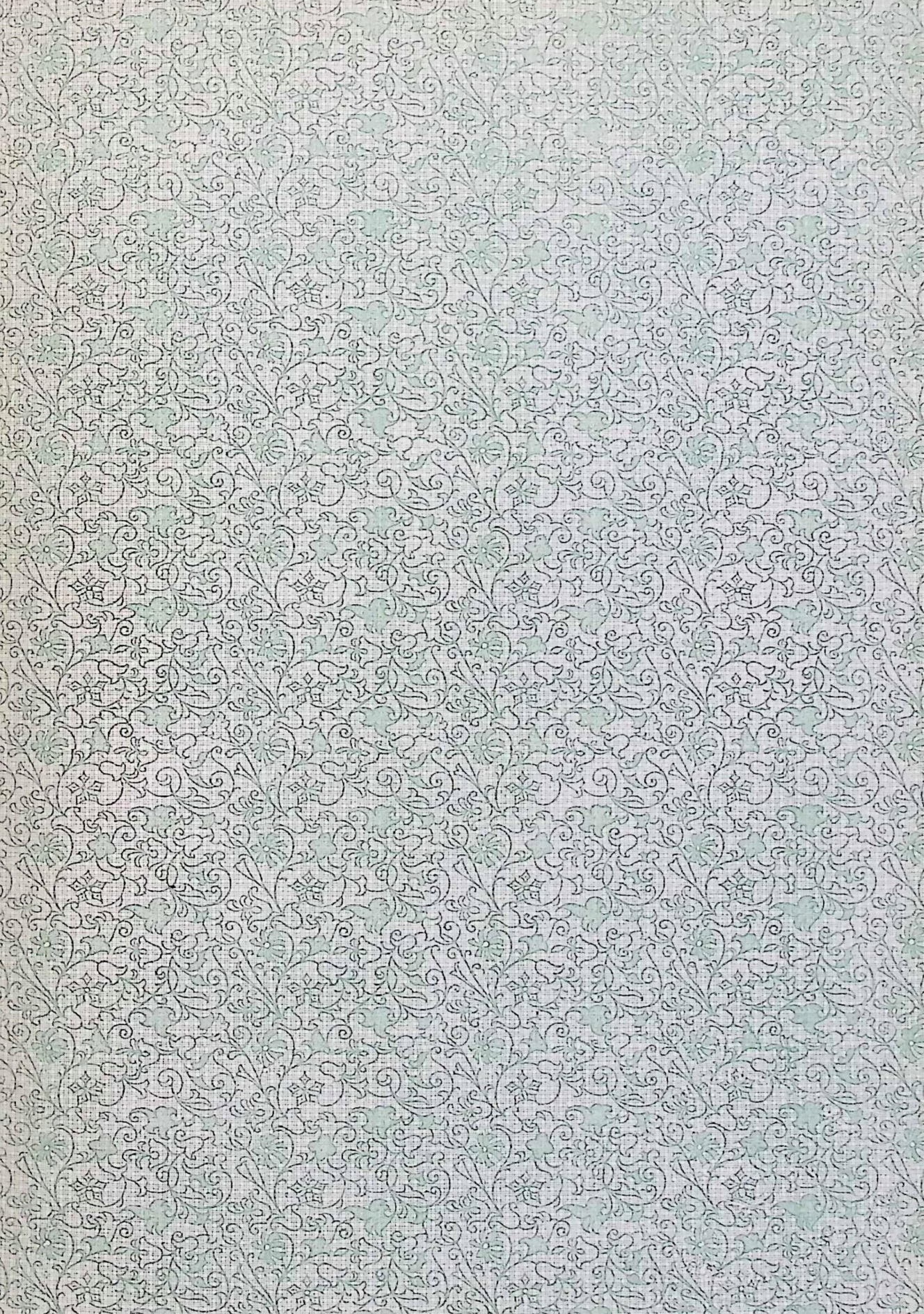
CHIROPRACTIC

VOL. I

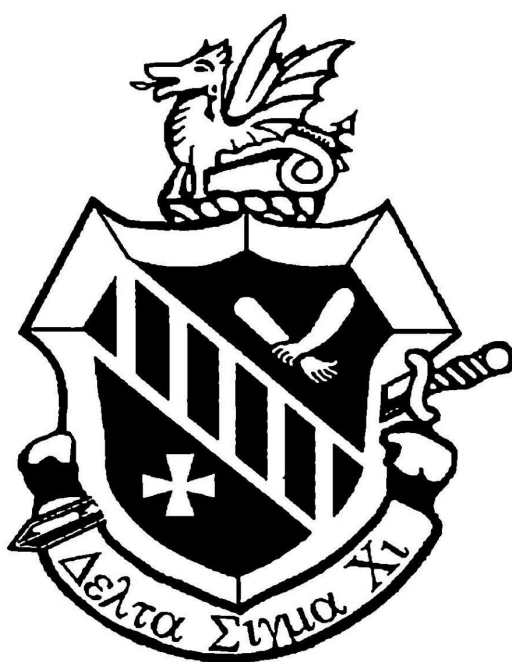
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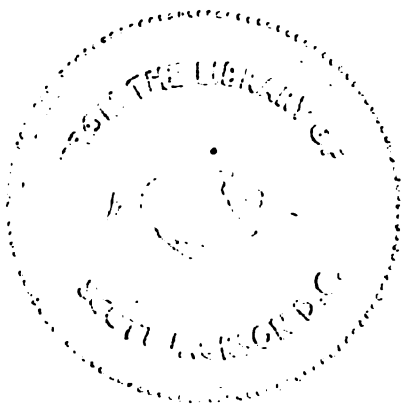
1920





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==THE==

Science of Chiropractic

—ITS—

Principles and Philosophies

BY
B. J. PALMER, D. C., Ph. C.

—
FOURTH EDITION
ILLUSTRATED
—

THE PALMER SCHOOL OF CHIROPRACTIC, PUBLISHER
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—
1920

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B. J. PALMER, D. C., Ph. C.
Davenport, Iowa, U. S. A.

B. J. PALMER, D. C., Ph. C.
Pres. of *The P. S. C.*

Following is a good likeness of "B. J." He has shown indomitable will and courage in preserving the science of Chiropractic from corruption. He is zealous in protecting this knowledge and unique adjustment for the prevention and adjustment of cause of human ills against the intrusion of other and inefficient methods.

Although of a professional, rather than of a business trend of mind, he has full management of the business of the school.

B. J. Palmer more than offsets any lack in business talent by his stirring enthusiasm and his painstaking attention to the welfare and progress of students. His interest in graduates does not terminate when they leave the school, but continues until firmly established in the remunerative practice of Chiropractic, and as long as they continue such unmixed.

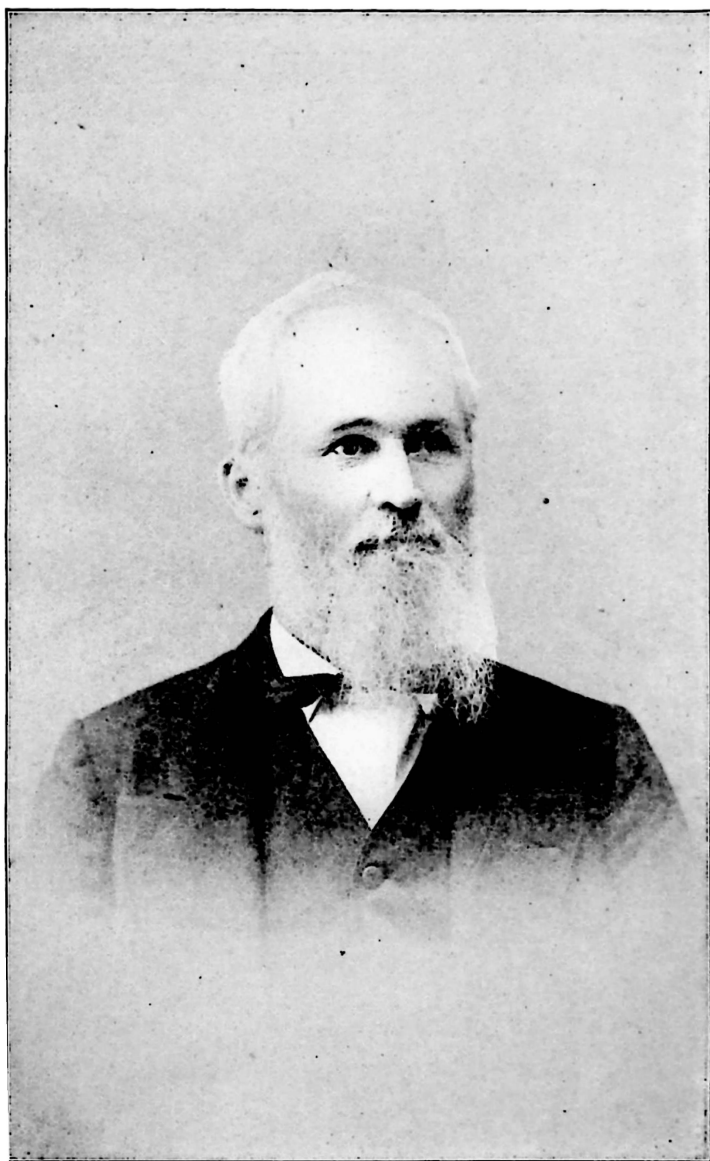


HISTORICAL

The Rev. Samuel H. Weed, A. B., 1864, and A. M. 1867, of Indiana University, and B. D., 1867, of the U. P. Theo. Seminary of the Northwest; also a member of the Co. K. 133 Regt., Ind., Vol. Inf., resides at Monmouth, Ill.

Mrs. Weed and daughter took Chiropractic adjustments in 1896 and were much benefited, after which Mr. Weed also received adjustments for sciatica and was relieved. About this time he was asked to suggest a name for the science and art. He simply translated the description of it, "donè by hand," into Greek, and thus originated the name *Chiropractic*.

Mr. Weed, by receiving adjustments himself for various serious ailments, and observing closely the results of adjustments on many others, strongly endorses this most simple and efficient system and will hail the day when poisonous drug treatments, needless painful or torturous butchery, called surgery, is discarded and Chiropractic is universally adopted.



A LIST OF GREEK WORDS.

We are indebted to Rev. S. H. Weed for the following list of various words that have a relation or close bearing in meaning to "Chiropractic."

Χεῖρ
Χεῖρο

The hand. Cheir, Kire. In composition—Kiro.

Χειρίζω
Cheirizo,
Kiroizo,

To handle, to perform an operation by hand (as in surgery). This would answer to describe hand treatment for disease, and the following forms would naturally come from it:

Chirism,
Kirism,

Handling, or performing an operation with the hand.

Chirist,
Kirist,

One who practices healing by hand, or advocates or believes in it.

Χειρουργός
Cheirourgos,
Kirurgos,

A hand worker or hand operator, a surgeon, which latter is the same word after passing through the French into English. This would be unsuitable, as it already has a fixed meaning in our language.

Θεραπεύω
Therapeuo,
Therapeu,

To cure, to attend. Therapeutic, therapist, and therapeutics are from this word. As they stand, it is understood that they mean curing or nursing with medicines, but with Chiro prefixed they could not mean that. A Chirotherapeutic would be one who cures with the hand. Chirotherapist, one versed in hand curing. Chirotherapeutics, the science of hand curing.

Ἱατρός
Iatros,
Eatros,

A healer, a physician.

Chiriatus,
Kiriatus,

A hand healer or hand physician.

Chiriatic,

One versed in, or adhering to, hand healing.

Chiriatic,

The science and art of hand healing.

Καταρτίξω
Katartizo,
Katartizo,

To adjust, put in order again, restore.

Chirocatartist,
Chirocatartist,

One who adjusts or puts to right by hand; just the right meaning, but a jaw-breaker.

Ποίω
Poieo,
Poieo,

To do or make.

Chiropoiesis,

The art of doing or forming by hand.

Chiropoietic,

Done or shaped by hand.

πρακτός
Practos,
Praktos,

Done, to be done.

Πράκτωρ
Practor,
Practor,

One who does or executes, a worker.

Πρᾶξις
Praxis,

Doing, deed, practice.

Chiropact,
Chiropactic,

Done by hand, or one that advocates or does hand practice.

Chiropractor,

A hand practitioner.

Chiropractic, or

Chiropraxis, or

Chiropraxy,

The science and art of doing by hand.

CHIROPRACTIC DEFINED.

Historical—The first accidental crude Chiropractic adjustment of a vertebra was given in September, 1895, by Dr. D. D. Palmer. Neither the art, nor the science was formed at this time. Its growth remained practically dormant till 1903, since which time his son, B. J. Palmer, D. C., Ph. C., has developed it into a well defined non-therapeutical philosophy, science and art that has no resemblance whatever to any therapeutical method. Health (equality) is restored by completing the mental and physical circuit; restoring the currents of cycles of mental impulses acting through the material agency; to replace the full quota of positive with an equivalent negative; permitting the reconveyance of the intelligent immaterial into the mechanical corporeal; to reconstruct the normal psycho-physical unit; to make as one the triunity of creation, transmission and expression; to re-establish equilibrium between the abstract and concrete, all of which is induced by replacing specific disordered concrete mechanical anatomy which permits adjustment between that one law of two principles—cause and effect—the rules and manner of declaration of which are unique and unlike any theories of stimulative or inhibitive movements or applications used by any other school.

Defined—Chiropractic is a name given to the study and application of a universal philosophy of biology, theology, theosophy, health, disease, death, the science of the cause of disease and art of permitting the restoration of the triune relationships between all attributes necessary to normal composite forms, to harmonious quantities and qualities by placing in juxtaposition the abnormal concrete positions of definite mechanical portions with each other, by hand, thus correcting all subluxations of the three hundred articulations of the human skeletal frame, more especially those of the spinal column, for the purpose of permitting the re-creation of all normal cyclic currents through nerves that were formerly not permitted to be transmitted, through impingement, but have now assumed their normal size and capacity for conduction as they emanate through intervertebral foramina—the expressions of which were formerly excessive or partially lacking—named disease.

All movements, whether normal or abnormal, of, or in the body (including blood circulation), are but the personification of mental equivalents—mental functions guided by Innate Intelligence, creating physical expression. All ache or pain is but the Intellectual interpretation placed upon impressions received from the periphery concerning the abnormal physical conditions.

Every act and thought is controlled by Innate Intelligence through the medium of the brains and their prolongations—nerves—to tissue. *It is the life of the body when transformed in the brains.*

We are well when Innate Intelligence has unhindered freedom to act through the physical brain, nerves and tissues.

Disease is a lack of normal functions.

Innate mental impulses control the vital functions of assimilation, circulation and respiration, asleep or awake. Dreams are sensations interpreted by the same discriminating force.

Diseases are caused by a *lack of current of innate mental impulses*. This is produced by a constricting force placed around nerves through accidents—vertebral subluxations. These displacements are *caused* by a concussion of forces, the external meeting the resistance of the internal, induced by traumatism.

Chiropractors use the spinous and other processes as handles to adjust subluxations; by so doing they restore mental currents to normal transmission—and health exists.

Chiropractor—One who knows the science, art and philosophy of Chiropractic and how to adjust subluxated vertebræ by placing in apposition the articular processes of the vertebral column.

D. C. (Doctor of Chiropractic)—The sign used to designate one who practices the philosophy, science and art of Chiropractic.

Ph. C. (Philosopher of Chiropractic)—The sign used to designate superior attainments in the study and practice of the philosophy, science and art of Chiropractic.

Treat—(Webster)—To care for medicinally or surgically; to manage in the use of remedies or appliances, to treat a disease, a wound, or a patient.

Adjust—(Webster)—To make exact; to fit; to make correspondent or conformable; to bring into proper relation.

Adjustment—The name of the action of the Chiropractor when he adjusts “into proper relation” Innate Intelligence with its physical—conforms the mental with its equivalent body—reunites the mental and physical—or restores one to the other.

Luxation—Where two articulating surfaces have wholly lost their proper connection.

Subluxation—Incomplete luxations, where articulating surfaces have in part lost their proper apposition.

(For more thorough definitions see Vol. 3 of *The Science of Chiropractic*.)

PREFACE.

The object of this book is, primarily, to assist in placing Chiropractic on a firmly scientific basis.

We do not expect it to stand upon its literary merits; for if unsound in principle, felicity of diction cannot save it; if sound in principle, homeliness of expression cannot destroy it.

Our primary object in compiling these writings and offering it to the public is in response to an immense demand thrust upon us for the same, thus assisting to bring it within the domain of the exact sciences.

In proportion as we gain knowledge of the cause of disease, we cease to treat effects. All therapeutists treat effects with remedies. Students may purpose learning the cause of disease to locate and adjust; may have the idea of adding Chiropractic to therapeutic remedies, but in proportion as they learn the cause of symptoms and how to adjust, the less they will use remedies. Chiropractic is not a remedy. It is not treating effects by therapeutical remedies. Therapeutical remedies, be they hypodermic injection, suggestive therapeutics, physical culture, magnetic treatment, or any other means used for the amelioration of diseased conditions, is of superstitious origin. If it is better to know the *cause* and how to right it than to treat effects, *why not* learn all we can of the former and quit thinking of the latter?

I aim to be liberal enough to agree that all modes of therapeutical treatment of disease have more or less effect upon the symptoms, but we are not concerned about the methods of treating effects, for we learn how to adjust the cause of all inordinations in the body.

The more you depend on therapeutical remedies and use them in treating effects, the slower you will be to accept Chiropractic and learn how to adjust the causes of diseases. In other words, the more you think of treating effects, the slower you will be to take in Chiropractic. The more tenacious to the old, the less readily you absorb the new.

We do not blame you for selecting the best therapeutical remedy for diseased condition, for doing the best you could in the past, but we do pity you and the world for not having sought after and long ago found the *cause* of ailments. You, my students, have this book for the purpose of learning how to right the wrongs that cause our ailments. If you desire to put brakes on the wheels of progress, to retard your development, and those with whom you come in contact, continue to keep your minds, and others, filled with remedies for symptoms. To take in a new idea you must destroy the old, must let go of old opinions, to observe and conceive new thoughts. To learn is but to change our opinion.

In conclusion, I desire to say that I claim no credit for this work other than that which is due to an honest scientific desire to promote the truth for its own sake. Sincerely believing in the absolute correctness of Chiropractic principles, I have not hesitated to follow it to its legitimate conclusion in every field which I have studied.

I am perfectly aware that many conclusions reached in these pages are antipodal to preconceived ideas and for the purpose of establishing the individuality of Chiropractic, I publish them.

B. J. PALMER, D. C., Ph. C.

President, The Palmer School of Chiropractic ("Chiropractic Fountain Head"), Davenport, Iowa, U. S. A.,
1906-1910-1917.

CHIROPRACTIC BRIEFS—No. 1.

Chiropractic is a science.

Drugs are a delusive snare.

Health is better than wealth.

This book will make people think.

Chiropractic is the study of Innate.

Analysis includes both science and art.

Chiropractic is thoroughly American.

The doctor who has no patients, loses none.

The sick need help, not drugs or incantations.

Chiropractic is the product of independent thought.

Economy is one of the basic principles of Chiropractic.

Better learn to adjust subluxations than to handle drugs.

We have our idiosyncrasies. Chiropractic is one of them.

The human body should be repaired, not poisoned by drugs.

Observations are stepping stones on the plain of progress.

Chiropractic is a distinct science, it is yet being developed.

The pathology of therapeutics is not that of Chiropractic.

Chiropractic adjustments are attracting universal attention.

Adjusting shows the skill or awkwardness of the Chiropractor.

Pain is the mental interpretation of abnormal physical conditions.

Chiropractic is hand adjustment, founded on mechanical principles.

Diathesis in etiology is a word without a meaning to a Chiropractor.

Why not learn to adjust the subluxations and help the disabled.

We intend to give free rein to Chiropractic thoughts and expressions.

Chiropractors find subluxations which cause abnormal functions.

The time is coming when a drug store will be thought less of than a saloon.

It appears that all nations have some form of home manual treatment.

The growth of *Chiropractic* has been in proportion to its individuality.

A knowledge of the *principles* of Chiropractic is necessary for success.

Chiropractic seldom fails, and never does harm when properly handled.

Chiropractors adjust the cause of disease instead of treating effects.

As a rule, doctors and lawyers run their business for what there is in it.

M. D.'s rely largely on subjective symptoms; the Chiropractor on objective.

Sneers will not down facts; they are not weapons of a truly scientific mind.

Science is a knowledge; art is manifested in the ability to use that knowledge.

There is no power in a bath, vibrators, or battery to replace a displaced joint.

Some Chiropractor will advertise to teach Chiropractic by mail and fool many.

We neither treat, knead, or manipulate our patients. We adjust subluxations.

The one who criticises lays a crown at the feet of the one whom he animadverts.

The Osteopaths use many movements for each disease, the Chiropractor but one.

Chiropractors trace a large share of ailments to the mal-alignment of vertebræ.

This school does not ask you to believe anything that cannot be proven in the clinic.

We do not expect to please all. What is mental food for one is poison for another.

When we are in perfect health, functions of nerves are performed in a normal measure.

Those who practice the science of Chiropractic are Chiropractors, not "Chiropractics."

Adjusting the cause of disease ought to be substituted for treating the ailment.

There is no effect without a cause. Chiropractors adjust causes, others treat effects.

Other schools are learning that diseases are nerve disorders, instead of blood poisons.

Physicians of any school are invited to call and see our unequaled pathological collection.

Chiropractic is founded upon a correct knowledge of anatomy. It adjusts displacements.

Nerve impingement may cause inflammation in a bone or joint, the same as in softer tissue.

Chiropractic does not derange the nervous system by causing abnormal functions, as do drugs.

No worthier profession exists or offers so many opportunities for doing good as Chiropractic.

Chiropractors have located the cause of neurotic diseases which have baffled the medical world.

Chiropractic is the only science that exactly locates the cause of disease, and then adjusts it by hand.

Freedom of practice in the healing art is imperatively necessary for advancement and improvement.

The Chiropractor is not valued according to the amount of hard work he does, but by the skill employed.

The more clearly and forcibly we can impart the principles of Chiropractic, the better it is for our students.

Every physician and scientist who investigates Chiropractic says it is logical and in accordance with facts.

The people desire the doctor who is skilled in his profession. They have but little use or respect for a hybrid.

All the drugs in the world would not adjust a displaced joint, whether it be in the vertebral column or elsewhere.

The Chiropractor is presenting to his patients a system that is scientific, devoid of therapeutical experimenting.

The Osteopath accepts all of Allopathy, except that of drugs. Chiropractic assents to nothing that is Allopathic.

Chiropractic will revolutionize the old school methods which have treated disease for 2,000 years.

Loss of life does not come from Chiropractic adjustments; wish that we could say as much for surgical operations.

The people need light to protect themselves from the Germodi-toxin—Radi-Electric-Microbi-slush death producers.

The world's successful men, and those who are going to join the ranks, never say to themselves, "I'll do it tomorrow."

The medical schools talk about "ridding the body of disease" as though it were something foreign that had to be driven out.

Many people tell us that they have tried everything, when the facts are, they have only used prescribed or patent medicines.

No other profession offers such an opportunity to think, reason, investigate and discover new and valuable truths as Chiropractic.

Stand by your principles, defend your rights, whatever comes of it. Nothing else in this world can bring you satisfaction in life.

Many remedies are positively injurious, others harmless, *and some are decidedly a benefit*, but is it not better to adjust the cause?

A machine for the replacing of vertebrae is too much like using brute force. Better use Chiropractic, using the processes as levers.

Acute diseases demonstrate our success in practice. Where medicine requires weeks, the Osteopaths days, we ask only for minutes.

In the near future, Chiropractic will be valued for its preventive qualities as much as for relieving and adjusting the cause of ailments.

There are persons who would rather be killed by a regular in a customary manner than get well by an irregular in an unusual manner.

Chiropractic is not faith cure, Christian Science, magnetism, electricity, Osteopathy, hypnotism, massage or anything but Chiropractic.

To comprehend what Chiropractic is, necessitates a knowledge of the principles of the science; wherein it differs from therapeutic schools.

If a vertebra or joint has been drawn or forced out of its normal position, why not replace it, instead of using a plaster or liniment?

The elastic cushions, named intervertebral cartilage, answer a similar purpose in the vertebral column as do buffers between railroad coaches.

Chiropractic knowledge cannot be rubbed in until the arthritic deposits in medical joints have been dissolved by browsing on cause and effect.

"Dietetics." When man has sufficient intelligence to build a child, then and not until then, can he dictate to Innate what and how to "diet" the body.

If you are sick use your reason, do not dose your stomach for a distress which is caused by some nerve being impinged, remove the pressure.

A Chiropractor is one who has acquired a knowledge of the science of Chiropractic and who is skilled in the art of adjusting vertebrae by hand.

Why does a physician prescribe for effects, symptoms, disease? Because he does not know the cause. If he did, he would adjust, instead of treating.

Chiropractors correct the mechanical displacements which cause derangements, thereby liberating impinged nerves, allowing normal functions.

The P. S. C. will at all times take pleasure in showing those interested the difference between treating the effects and adjusting the cause of disease.

Four hundred years before Christ, Iccus, and later Herodotus, applied bodily exercises and manipulations of the body to assist in restoring health.

Regular physicians have caught on to the triumphant idea of combining strychnine with morphine, so as to irritate as well as deaden the patient.

When your spine is pliable, elastic and supple, you are young and buoyant. As your backbone stiffens, becomes rigid, and inflexible, you become old.

We do not use electricity, X-rays, drugs or anything else to treat the symptoms, but depend upon adjusting the wrong which produces the ailments.

The replacing of a vertebra may be accompanied by an audible sound when adjusted, or it may not be. We often replace vertebrae without any noise.

Physicians are learning to give less drugs. They find that poisons are not suitable for the human body. They give a little to satisfy their patients.

The Chiropractor asks for symptoms that he may locate the cause of the ailment. The medical man inquires about infection in order to name the disease.

Cause and effect are not identical, the former always precedes the latter.

Under the guise of philanthropy and the public good, the people are required to patronize a privileged class of drug dosers, no matter how distasteful.

Physicians desire to know the why, how and what about everything except disease. They reason upon all else, but in sickness they seek only for relief.

The more medicine one takes, the more must be taken. The smaller amount taken, the less needed. If none is taken, it is soon discovered that none is needed.

Humanity is losing faith in drugs. Why not, when the most eminent physicians in all ages have expressed a belief in their unreliability and worthlessness?

Chiropractic is radically different from all modes of healing. No one could expect to become acquainted with its principles by reading one or two leaflets.

The skeletal frame constitutes the stability of the human body. Just in proportion as its parts are in normal apposition, its healthy condition is unwavering.

Horses, after a hard day's work, desire to roll on the ground for the purpose of relieving tired muscles. It is to them what napravit is to the Bohemians.

A Chiropractor does not know an anterior subluxation. He comprehends what the Osteopath means by them, and knows how and why the mistake is made.

From baby in the high-chair to grandma in the rocker, we are liable to accidents which displace some portion of our bony framework, causing future disease.

Roots, herbs, drugs and minerals are used to treat the effects; they often produce other symptoms much worse than the diseases they are expected to cure.

Gradually the barriers of prejudice and ignorance are giving away. There is no longer thick ice to be broken. Chiropractic is known for what it is worth.

Chinese and Egyptian history shows that a system of healing not unlike what is now known as Manual Therapeutics, was practiced centuries before Christ.

"Osteopathy includes all that is reliable in the therapeutics of medical science." Chiropractors do not include nor accept anything that is therapeutical or medical.

One who dies under the treatment of an irregular causes much more comment by the regulars than many who die of the same disease under the old-time dope dispenser.

Why search the world over for an exterminator or an antidote for disease? Why not look for the cause of our ailments in the person afflicted and then correct it?

While all articulations have a certain amount of play, the exceeding of this limit causes the cartilage to be torn from its contiguous surface and subluxation to exist.

All therapeutical schools direct their treatment, consisting of remedies, to the part of the body where abnormal functions are manifested in symptoms, named disease.

Why use two or more systems, the principles of which are diametrically opposed to each other, in the theory and practice? If one is right in its doctrine, the other is wrong.

It is useless to administer a powder, potion or pill to the stomach when the body needs adjustment. The jeweler should repair the watch and not pour oil in the keyhole.

Nothing is so wholesome as a clear conscience; remember that you may be able to get away from those whom you have wronged, but you can never get away from yourself.

Relief by morphine and strychnine is attended by a loss of sensation and reason; they offer a senseless palliation that blocks the way of a correction and often causes death.

There is no more resemblance between Chiropractic and Osteopathy than there is between the Franklin printing press of 1720 and a three-deck Goss perfecting press.

"In acute diseases, can you always locate a subluxation causing the trouble?" Yes, much more readily than in chronic cases. The desired results are more quickly realized.

The body is a living mechanical nerve machine, liable to be injured by accidents which may displace some portion of its skeletal frame. Adjust, instead of trying to fix with noxious drugs.

Chiropractic is scientific. It is in harmony with nature. It is but natural to fix the wrong, if we knew what and how. This new science teaches the cause of disease and how to adjust it.

It has taken many years of hard study to localize the cause of disease, and close application to develop this unique method of adjusting vertebrae.

An Iowa Health Bulletin says: "The next examination of physicians and osteopaths." A distinction being made between a physician and an osteopath. An osteopath is not a physician.

The cause of disease is intelligible, the adjustments, though varied, are readily learned. Every move of a Chiropractor shows scientific intelligence, each move is made with a special aim in view.

We believe in sanitation and hygiene, those remedial measures which have lessened many diseases of our childhood, therefore we have a friendly feeling for all reform and harmless methods.

Disease is a material derangement and must have a material cause. Innate of itself is complete and perfectly capable of running the body. Disease being the manifestation of interference with transmission.

Chiropractic is not responsible for drug habits, but when properly handled, will correct subluxations which have been caused by the continued use of strong drink, tobacco or morphine.

All therapeutics, with very few exceptions, occupy the ridiculous position that malposition (subluxation) of the articular surfaces of the joints, more especially of the vertebral column, do not exist.

Chiropractors can, in a measure, predict individual diseases, by an examination of the spinal column. To replace the subluxations would be to remove the cause and prevent effects, called disease.

People make a great ado if *exposed* to a *contagious* disease, but they submit to being inoculated with rotten pus, which, "if it takes," is warranted to give them a disease. "What fools we mortals be!"

There is as much difference between therapeutical methods, which use remedies to treat disease, and Chiropractic, which adjusts the cause, as there is between a horse chestnut and chestnut horse.

Investigators think the discovery of Chiropractic wonderful. We think it strange that M. D.'s, who for centuries have dissected thousands of people, dead or alive, have never discovered the cause of disease.

We can, by one adjustment, so change the symptoms of pneumonia, typhoid fever and other acute disease, that any M. D. would not recognize it as the same affection he had diagnosed five minutes before.

The sacral nerves pass through foramina of large size, therefore are not liable to be impinged, except in great distortions by fracture in adult life, displacements in youth, or by cord impingements above.

The idea of poisoning healthy people with vaccine virus, inoculating them with one disease to prevent another, spreading it in a mild form, to protect the victim from a more serious attack, is irrational.

A physician of this city kindly offered to bring a spine to our office to show us a certain condition. He was not aware that we have more vertebral columns than all the Iowa and Illinois doctors together.

Chiropractors are opposed to poisoning any person, sick or well; therefore, we are opposed to vaccine virus, and the use of drugs as a curative measure, for they do not fix the wrong that causes the trouble.

Nature, Instinct, Subconscious Mind or Innate, has one fixed law of principle in all animal or vegetable matter. All living matter (and nothing is dead) is the demonstration of this fundamental law.

Chiropractors claim that when all parts of the skeletal frame are in proper apposition, there is health. That the bones may be displaced during sleep, or when we are awake, by accidents, or poisons, is a proven fact.

Germes are scavengers. To charge them with being the cause of disease would be as unjust as it would be unfair to the street scavenger to charge him with having produced the filth which he is engaged in removing.

One who is not afraid to think has discovered a great truth, which staggered him for three months before he could comprehend that he alone had found the cause of disease, that all other methods were treating effects.

It only brings the science of Chiropractic into disrepute to use remedies. The mixing of any drug or other agency with adjustment, for the treatment of disease, acts as a hindrance to the progress of this science.

The Osteopaths work the body, in all its various parts, from fifteen minutes to an hour each treatment. The Chiropractor locates the cause of the disease, then corrects the abnormal condition by one move in one second.

Chiropractors have adopted the appendix, D. C. (Doctor of Chiropractic), which they feel proud of. They have no desire to annex M. D., for a full-fledged Chiropractor does not use drugs; he does not dose his patients.

Living tissue has a feeder which extends itself from feeding point to every brain cell by a path. It is a positive fact that disease does not represent something wrong with the feeder but its method of transportation.

Some one says, "The wise man sells his knowledge." If he gave his knowledge away he would be a fool; and if he were a fool he would have no knowledge at all. Ergo—a man who gives away his knowledge has none to give.

The Chiropractor readily traces tender, sensitive nerves from the affected part to the subluxated vertebra in the spine where they are impinged, and vice versa.

Ray says: "He that uses many words for explaining any subject doth, like the cuttle fish, hide himself for the most part in his own ink." The Chiropractor, therefore, will try to tell what he has to say in as few words as possible.

Practitioners just opening an office, and especially since they use an unknown method, get chronic cases which others have abandoned, but in time they secure their share of the acute cases, which respond more quickly.

The road with the deepest rut is the most used. Chiropractors have built a new highway that has no ruts. Be careful, Chiropractors, lest we get into some of the old ruts made by other schools. You find it difficult to rid yourself of habit.

A human being, like inanimate machines, should be examined occasionally. If any part is found displaced, adjust it, using as much good sense in doing so as you would in repairing a watch, organ or steam engine. "A stitch in time saves nine."

When an M. D. speaks of "luxations of the spine," he refers to a complete separation of the articular processes. A Chiropractic subluxation is a partial separation of two articular surfaces, which are readily replaced by the hands of a Chiropractor.

D. S. Maddox, M. D., says in *Medical Brief* that "It is the consensus of opinion among the liberal element of the medical profession that no medical laws at all would be far better than those which now disgrace the statute books of most of the states."

There are hundreds of ways by which the joints of the skeletal frame are displaced, among which are slips, falls, strains, lifts, jerks, jars, concussions, the many poisons from decaying animal and vegetable matter, and those administered by physicians.

Chiropractors find subluxations that obstruct natural functions. Physicians look for obstructions in the fluid channels, give the stomach a dose, expecting it to hunt up the obstacle, clear the canals, retard or accelerate the circulation of the fluids.

Physiology is but the science of functions. Human physiology deals with functions of the human body. Pathological physiology is morbid functions. Functions performed abnormally create conditions known as disease. Normal functions mean health.

In the December number, 1905, of *Journal of Osteopathy* a writer says: "This bone (the innominatum) has caused the writer more worry and anxiety than any other piece of osseous structure of the body." Chiropractors have less trouble with ossa innominata than any of the vertebrae.

For a Chiropractor to injure one person, even to the causing of piles, is awful and should prevent many from going to them. But the killing of hundreds in the hospitals seems to have a fascinating influence on others, who are not only willing but anxious to have an operation performed.

Chiropractic came into existence through a combination of circumstances which made surrounding environments of such a nature that it could no more help being born than you or I. Such a coalition of conditions never did occur before; if they had, then it would have been discovered prior to 1895.

If you would be a man, not a flunky, do not put on the degrading livery of mental slavery which organizations keep for their members. The man who is true, who has merit, must have his own opinions, must speak his own mind, and live his own life. People know this, and judge accordingly.

A Chiropractor has no use for remedial agencies, nor the laboratory, to examine sputum, bile, urine, fæces, blood and serum, just to show the resultant conditions. It is the desire of the Chiropractor to adjust the cause of these derangements, named disease, then there will be no need of treating effects.

Man is a machine, one of the most wonderful ever created. Like all others, it is liable to have some portion displaced. Why not secure a human machinist who understands the cause of disease, a man who can detect and adjust that which is out of alignment?

We inherit family peculiarities, not only in outward shape, facial expression, etc., but in our internal expansion of bones, nerves and blood vessels; for be it remembered that no two of us are any more alike in our osseous and soft tissues than in our external form.

Chiropractors do not *combat* disease. They do not look upon it as an enemy that must be fought, conquered and vanquished, but the result of misfortune, as we would that of distress from a fractured bone or a displaced joint. The injured need our assistance and sympathy.

Nature makes no repetitions. Similarity there is, but never absolute likeness. This is nowhere so forcibly illustrated as in the spinal column, of which we handle many. There are no two of them alike. No one vertebra in one spinal column will fit in the place of another.

Heretofore, all modes of healing have looked upon blood as the life of the body. The Chiropractor says it is expressed by mental impulse; all fluids are propelled by mental force; the heat of the body, whether normal, too much, or not enough, is the result of mental impulse.

We adjust vertebral curvatures by hand, never by a machine. We never stretch the spine by any means whatever. Wedge-shaped vertebrae make curvatures. These must be returned gradually to their former shape. To do this there is much to be taken into consideration.

"Self-reliance is the salt of life which seasons all things and makes them good." The man who has self-reliance is free, happy and successful. Whatever reverses or misfortunes may overtake him he has the fortitude to meet them, the strength and habit of mind to get on his feet and recover lost ground.

There are many who claim to practice Chiropractic who know but little or nothing of it. It is therefore the purpose of this book and the parent school to teach this modern science unmixed. Those who desire to practice it with other methods have a right to do so, but they should not call the mixture Chiropractic.

The causes of vertebral displacements are many; they may occur while awake or asleep. Any force that will separate the articular surfaces, be that a wrench or the insidious displacement, which has its source in any one of the many poisons of decaying vegetable and animal matter, or that of drugs, will subluxate the vertebrae.

To force people to choose a doctor they do not want is to interfere with their liberty and individual rights. When human liberty is restricted for any pretext whatever, there is danger and trouble ahead. It brings the majesty of law into disrepute, demoralizes the community in which unjust laws are enforced and incites a rebellious spirit.

The developer of this new science has well-defined ideas to follow, which were Chiropractic (fixing by the hand). A mallet and stick to drive vertebræ into place, a machine to screw stubborn seventh cervical down, a towel wrapped around the body, a person walking on the back, is not Chiropractic, is not adjusting the vertebræ by hand.

Is not our literature comprehensive? Are not our statements plain? Do we not draw the line of demarcation closely? Do we tell our readers understandingly what Chiropractic is, and wherein it differs from other methods? If so, why do many persons think it hypnotism, magnetic, massage, osteopathy, or that which is known as nature cure?

We have made many people well who had rheumatism, and so have other Chiropractors, in less than a minute, by taking off pressure from nerves. Do you think for one moment that the adjustment changed the elements in the blood in that moment? Rheumatism is not a blood disease. Chiropractors are daily proving this bloody delusion to be untrue.

Disease is excessive or insufficient performance of functions. The Indian said that the white man looked like a loaf of bread not baked; the colored man, like a loaf all burnt black; but the Indian was just right, just baked brown. Health is a happy medium, when nerve functions are formed just right, neither too much nor not enough.

In the present advanced stage of knowledge pertaining to subluxations of the vertebral column, there is no necessity for pulleys, straps, hooks, traction tables, mallets, and chisels, or anatomical adjusters. As Chiropractic becomes recognized and understood, these contrivances are looked upon as objects of curiosity and implements of torture. They will cease to be used by intelligent people and be associated with those of the old Spanish Inquisition.

It is just as difficult to teach the essential principles and adjustment of Chiropractic to a doctor as others. It takes months to learn to adjust under a personal instructor. The student must be shown the abnormal in the patient and a corresponding specimen selected from our pathological collection. Then there are many variations and conditions to be learned. *Chiropractic cannot be taught by mail to any person, be he a doctor or not.*

When mental impulses of the thorax and pelvis are diminished they allow the internal organs to drop down, to become displaced, prolapsed, producing hernia, piles, prolapsus uteri and other diseased conditions. Why not look for the cause of such weaknesses? The taking of the pulse, temperature, respiration and an examination of the tongue and secretions will not locate the cause. Spinal analysis is worth much more to a Chiropractor.

Doctors like to experiment. They prescribe water, salt and the most deadly drugs, or stick a knife into you with as much indifference as you used to when skinning rabbits. Their charges run from two dollars a prescription to five hundred a rip. If any medicine contains deadly drugs the public has a right to know it. This rule should hold good in doctor's prescriptions, as well as patent medicines.

There is really no such thing as curing any disease. We do not cure or heal ailments. It is a misstatement, of which all well-informed M. D.'s are aware. Chiropractors adjust that which causes distress (disease). When the skeletal frame is normal, the functions are performed in a natural manner, consequently no disease (not-ease). To cure or heal is one of the Allopathic signboards which has become so fixed on the mental vision that it is difficult to change.

The medical man waits for symptoms to fully develop that he may determine the disease of the patient. The Chiropractor decides upon his first visit what portion of the spine has been disarranged by a wrench or absorbed poison, then replaces the displaced part to its normal position.

It is sickening to read of bacteriological experiments. Excretory and secretory fluids are taken from live and dead animals; poisonous drugs, decayed tissues, purifying and fermenting mixtures are stirred up with the most dangerous animal poisons known. These are examined with the hope that they may learn the cause of disease. These microbe hunters are at the wrong end of the string. Chiropractors are looking for causes. Bacteriologists are examining effects.

A Partnership.—“I called at Dr. Physic's office one day,” relates a gentleman, “and I found one of the most noted sexton-undertakers lying on a settee, waiting for the return of the doctor. The easy familiarity of his position, and the perfect ‘at-homeativeness’ led me to say, ‘Why, Mr. Plume, have you gone into partnership with the doctor?’ ‘Yes,’ he replied, as he raised himself up, ‘we have been together some time; I always carry the doctor's work home when it is done.’”

James Copeland, M. D., F. R. S., in *Practical Medicine*, date 1844, upon disease of the liver, says: "Being aggravated and the constitutional powers injured by the empirical and routine practice of bleeding, mercurializing, over-dosing and over-drugging; and although these practices are less remarkable now than twenty or thirty years ago, they are still notorious, and furnish arguments for the knaves of Homeopathy, of Hydropathy, and of other kinds of humbug, to assail the public mind."

The physically hampered mind is unable to express itself in natural manifestations. "Second childhood" is a lack of brain force; the mind's dependence upon nervous structure for self-expression is not complete; a lack of mental coordination; the mind cannot do more than give the distorted messages from Innate or Educated Intelligence. A person might be very intellectual, but handicapped by deafness, loss of sight, or when one "has a cold," he appears and feels a little off, in fact, dull.

Journal of Osteopathy says: "The entire system strengthened against further attacks of disease." Osteopathy, like Allopathy, believes disease to be an enemy, which may attack and overpower us, if our system is not fortified against it. Chiropractors do not look upon disease in any such light. They consider ailments as results of accidents which disarrange the bony framework of the body. Wherein is there any resemblance between Osteopathy and Chiropractic?

Could we but fancy the main shaft of a machine capable of the various movements of the vertebral column and subject it to the same number of twists and wrenches that the spine has to endure, we would no longer be astonished when shown so many vertebræ by Chiropractors that have slipped out of place. Is not the human body much more liable to have its parts racked out of their proper position and the resultant consequence more severe and reaching than that of an inanimate machine?

Medical Brief, page 489, says: "Every day I become more and more convinced that symptoms and not disease should be treated." Disease is but disturbed functions. It is a name given to a collection of symptoms. To describe a disease is to name the symptoms and effects that constitute the ailment. To treat symptoms instead of disease would be to give a remedy for each instead of all the different phases named disease. The Chiropractor would find the cause of disturbed functions.

The Chiropractic science is not the practice of medicine. The two are diametrically opposite. They are antipodal. That of giving medicine is of ancient date. No medical schools have ever taught the principles of Chiropractic. In fact, they do not believe in adjustments. Medical men look to the blood and germs as cause of disease. Chiropractors to nerves being impinged between osseous tissue. Chiropractic has met serious opposition from the medical men, who have old time ideas.

The P. S. C. has spent thirty thousand dollars and years of time collecting its museum of osteological specimens. This varied and immense aggregation has been the means and a necessity in discovering the cause of disease and in developing the science. It is equally as indispensable to students in receiving instruction in the principles of this accumulated and established knowledge which has been systematized and formulated into a science of which our graduates are qualified to judge.

Chiropractic is a combination of two Greek words, which means done by the hand; a hand practitioner, one who repairs, adjusts; as used by Chiropractors it means the replacing of articular surfaces that have been slightly displaced. Walking on the back, using a towel around the chest as a tourniquet, a mallet and stick to drive the projecting vertebræ in line, general and local traction, screwing down a stubborn seventh cervical vertebra with the anatomical adjuster, is not hand adjusting, is not Chiropractic.

What is the factor that changes conditions named disease to that of health? Innate Intelligence is the director, the mover, in this transaction. An M. D. looks after the disease, and prescribes a certain treatment for it. He may find the kidneys, liver or pancreas not performing their functions properly, but no matter, the dose is prepared for and given to their neighbor, the stomach. The Chiropractor finds what organ is not doing its duty, then, instead of treating a well one, finds the cause of derangement and adjusts it.

The new era will be free of the pharmacist whose occupation is to use the pestle and mortar compounding various drugs; the patent medicine venders who have encompassed the earth to find the most poisonous and loathsome plants, the bodies, entrails and feces of insects and animals, each of which has been made to contribute as a dose for the stomach of suffering men, women and children. But, thanks to the power of man's understanding, the doom of poisonous medicines and vile drugs has been written in one magic word—*Chiropractic*.

Medical Standard, under "Adversity Makes Strange Bedfellows," says: "Two Mexican students have discovered that the tapeworm prevents the organism from being infected with tuberculosis bacilli. To establish the efficiency of the remedy the physicians injected the live cure into several patients, all of whom recovered." The tapeworm eats the tuberculosis bacilli. That is the Allopathic conception of ridding the body of disease. War. A fight on hand. One disease to combat another. Allo-one and pathy-disease. One disease for another.

Opium, administered by the physician, has been the means of deathbed recantations, and has assisted the treacherous hand of the will distorter. The changes made in deeds, wills and important papers by sick people are often due to mental maudlin, artificially sentimental, their minds easily moved. Courts should set aside all wills and codicils drawn by such subjects. Upon proof that the maker or remodeler of important papers had been drugged by strychnine or morphine, whether by mouth or hypodermic injection, such papers should be ignored.

Displacements of the 300 articular joints, more especially the fifty-two of the vertebral column, are not always caused by violent injuries or accidents. There may be poisons in the food we eat, the water we drink, or the air we breathe, which affects the sensory nerves; these abnormal sensations cause motor mental impulses to contract muscles which draw the articular surfaces awry. No matter how they are displaced, the Chiropractor sees fit to replace them in their normal position. When perfect relationship is re-established, health is the inevitable result.

Visitor.—"You must have a remarkably efficient Board of Health in this town."

Shrewd Native.—"You are right about that, I tell you."

"Composed of scientists, I presume?"

"No, sir. Scientists are too theoretic."

"Physicians, perhaps?"

"Not much. We don't allow doctors on our Board of Health—no, sir—nor undertakers, either."

"Hum! What sort of men have you chosen, then?"

"Life insurance men."

Churns of many forms have been used for centuries to separate the casein, which is afterwards formed into cheese and butter; but a man who had the "persistent courage, acquisitive combativeness, approbateness and executiveness" claims to have made a new discovery of separating the casein from the

milk by a machine he named "The Separator." Should the old mossbacks persist in saying that "it is nothing new" although it made as great an innovation in the art of butter making as has Chiropractic over the old methods of Osteopathy, Massage, Swedish movements and Napravit?

Between intervertebral notches are nerves which convey mental impulses which perform the various functions of the body. When the intervertebral cartilage becomes condensed, less elastic and thinner, the vertebræ are drawn closer together, occluding the foramina, slightly impinging nerves, causing a lack of functional force; vigor is impaired, and in proportion old age advances. If we keep our vertebræ separated, movable and free, age stiffness will be eliminated. We have been taught to observe effects; the real cause—closed joints—have not been noticed by the medical world.

The Chiropractor takes the disordered mechanism of man, and, by properly adjusting the deranged parts, allows impulses to perform their natural functions. The medical man clogs its machinery with mysterious mixtures and finally turns it over to the surgeon to complete the work of destruction. We believe that disease is the result of anatomical abnormalities (bones slightly displaced by various accidents) which cause physiological discord and abnormal functions. Therefore, to return to health, free the body of pain and distress, we replace the displaced parts of the nerve machine in their proper position.

They tell me it does not pay to tell the truth; that when a patient asks, "How long will it take to adjust my cause?" the doctor should state some certain length of time to appease their consciences. It does not pay, from what point of view—financial? The financial point is not everything. Be honest with your conscience first; if so, you cannot be dishonest with the other fellow. I pity the man that has so little honest decision, who, before saying a word, catches himself, slaps his hand on his mouth, and stops to meditate, "Will it pay to tell the truth?" What's the odds—more truth, more business—we are not going to live forever.

Looking over our immense vertebral collection, which is the largest in existence, we find caries limited, as a rule, to the bodies and articular processes. The laminæ, transverse and spinous processes are rarely affected. Various reasons have been assigned by many authors, but none were satisfactory until we discovered that heat production was controlled by mental

impulses. Excessive heat softens bone and produces caries. Articular and intervertebral cartilages being good conductors of surplus heat, explains why the articular and intervertebral cartilages become fibrillated, disintegrated, and the adjacent parts of the bodies affected by caries.

We have neither a "process of treating disease," nor a "method of treatment." Instead of treating the disease, we adjust that which produces it. In place of a "method of treatment," we bring the abnormal parts to a true relative position. A Chiropractic lesson may help to explain the difference between adjusting and treating. I had a case containing pathological specimens, the doors of which did not close properly. When shown the trouble, a student at once said, "Shave off the sides of the doors, so they will close." I replied, "That is Allopathy. We will use Chiropractic." We leveled the case, adjusted it, then the doors were O. K.

The brain sends its messages through the spinal cord to all parts of the body. The spinal marrow passes down through the spinal canal; it consists of nerves which convey mental impulses efferently, and tactile impressions afferently. They branch out from the spinal cord in all directions, absolutely controlling every part of the anatomy. So potent is this control that all action, whether normal or abnormal, is absolutely dependent upon the condition of the nerves radiating from the spine. A wrench of the vertebral column displacing the two movable notches which form the foramina invariably leads to some disturbance of that portion to which the nerves proceed and end.

There are 310 mechanical movements known to workmen; all are modifications of those found in the human body. In this machine are all the levers, joints, pulleys, pumps, pipes, wheels and axles, balls and sockets, beams, girders, trusses, buffers, arches, columns, cables, and supports known to science. Man's best mechanical works are but adaptations of processes found in the human body—a revelation of the first principles used in natural philosophy. Why not learn something of the use and the disuse of these mechanical movements? Why not use as good judgment in adjusting this piece of machinery as we do the inanimate? If you cannot use pulleys, then learn to use levers and bars.

Be grand in purpose, brave in act,
 As you and truth decide it;
 Swift in defense, slow in attack,
 Then, what the issue, bide it!
 If opposition bar your track,
 Don't turn, but override it.
 Stand close to all, but lean on none,
 And if the crowd desert you,
 Stand just as fearlessly alone
 As if a throng begirt you,
 And learn what long the wise have known,
 Self-flight alone can hurt you.

WILLIAM S. SHURTLEFF.

Did you ever hear of a symptom or an ailment being fixed or adjusted? It is impossible to adjust or fix illness or complaints. You cannot adjust a malady or disease. You cannot adjust effects. You can learn to adjust the cause of sickness. Symptoms, ailments, complaints, disorders, illness, indisposition, malady, sickness or disease may be treated, but not adjusted. You cannot treat causes. They must be made right—adjusted. Why should a Chiropractor say that he treats a person for an ailment, simply because of custom? Custom has always treated diseases. We have always talked about treating, because we never knew anything about adjusting the cause of symptoms. *The P. S. C.* has broken away from custom and so may you.

Medical Brief says: "It is the experience of every practitioner that drugs do not have the same effect on all individuals. These idiosyncrasies are not only peculiar to the individual, but run through whole families. Just why certain drugs do not act as well in these cases is not known, but the fact must be taken into consideration." Just why the same drug does not have the same effect upon one person as upon another is perplexing to physicians. There are no two individuals alike in any respect. We are radically different in the quality and sensibility of our nerves. All drugs are foreign substances and more or less poisonous to our bodies. Innate Intelligence takes cognizance of the fact, but, for various reasons, does not always use the same method of force to remove the intruder.

There's a worth in Chiropractic
 That is even more than gold.
 It is like the first love story—
 Better experienced than told.

One lies in easy position ;
 The next he hears a click ;
 He feels the pain has vanished,
 And relief has come that quick.

The world needs Chiropractors—
 Needs them on every hand.
 For those in pain and anguish,
 This is a weary land.

Then let us strive to be masters
 In this art that we employ ;
 To make the whole world better,
 And more full of peace and joy.

Do you believe in a Supreme Being? Do you believe in a *perfect* Supreme Being? Do you believe that this perfect Supreme Being could do an imperfect thing? Could you suggest one thing that He does that could be improved? Could you suggest an improvement to be added to a new-born babe? Does man make a single article, tool, instrument, etc., perfect or does he add one improvement after another? Innate is perfect, makes perfect bodies, trees, bushes, animals, in fact, all which has life is the handiwork of Him. These objects are perfect, complete, at time of birth. If anything was added it would be a drag. If an organ, tissue or muscle was taken from the body, just so much would the general metabolism be interfered with, for the missing organs would fail to do their share of work. Believing that Innate is perfect, if man removes any organ he is to that extent denying the ability of Him who created, to do things perfect. Is he denying the ability of Him to do things as they ought? If a man be a *true* Christian he must know of the all wisdom of the Creator, nor must he criticise to the extent of destroying any part of His works.

In every newspaper we're sure to find gush about the man behind
 the counter and the man behind the gun ;
 The man behind the buzz saw and the man behind his son ;
 The man behind the times and the man behind his rents ;
 The man behind his plowshare and the man behind the fence ;
 The man behind the whistle and the man behind the bars ;
 The man behind the kodak and the man behind the cars ;
 The man behind his whiskers and the man behind his fists ;
 And everything is entered on the lists.

But they've skipped another fellow, of whom nothing has been
 said—
 The fellow who is even or a little way ahead,

Who always pays for what he gets, whose bills are always signed—

He's a blamed sight more important than the man who is behind.

All merchants, and the whole commercial clan,

Are indebted for existence to this honest fellow-man.

He keeps us all in business, and the town is never dead ;

We take off our hats to the *Chiropractic* man who is ahead.

IF YOU ONLY KNEW

You would have no grim forebodings
Of the symptoms called disease,
You would cease to keep your children
Close confined and hear them tease
To enjoy the pleasant pastimes
That to every child is dear ;
You would have no fear of fevers
That are sometimes lurking near,
If you only knew.

You would have no anxious moments
With diphtheria cards next door ;
You would laugh at coughs and measles,
And the many ills in store.
You would strive to teach your neighbors,
As you witness their distress,
That these ills are only trifles
Caused by accidents—no less,
If you only knew.

You would smile at pangs of toothache,
And neuralgic pains so sore ;
You would dread the gout and cancers,
And rheumatism never more ;
You would lie upon your pillow
And indulge in perfect rest,
If you had heard of Chiropractic,
And had seen successful tests—
If you only knew.

You would fear no germs or microbes,
Or their power to seal your fate ;
You would dwell in sweet content,
When adjustments close the gate,
You would know that these contagions
That were taught to you for years,
Are but myths and allegories
To the Chiropractor's ears—
If you only knew.

You would feel that life's worth living,
In this blessed land of ours ;
You would revel in the sunshine,
And the fragrance of the flowers ;
You would love to win your neighbor
From the error of his ways,
And thank God for Chiropractic,
And the joys of healthy days—
If you only knew.

L. H. NUTTING.

PATHS OF PROGRESS

A youth starting out in life,
Ambitious to win fame,
Decided to affix M. D.
To ornament his name.
He chose the Path his father trod,
And studied night and day ;
He soon was giving poisoned drugs,
The same old-fashioned way—
An Allo-path.

If morphine pills and calomel
Were good enough for Dad,
It didn't suit his customers ;
He found their action bad.
He entered a more modern school,
Which "high deglutations" taught,
Traveling on a broader path
Where many cures were wrought—
A Homeo-path.

Ever ready for new thoughts,
And losing faith in pills,
He found a more progressive path—
A sure cure for ills.
He gave up drugs entirely, and
Is now in great demand ;
He doesn't give prescriptions now,
But does it all by hand—
An Osteo-path.

Progression seems to be his forte,
He studied water cure,
And uses "Nature's medicines—
Sun, air, and water pure" ;
And all these paths have taught him this.
The best one in the land—
That Nature is the Doctor, and
To know and understand—
A Hygeo-path.

H. L. Nutting thinks the following two verses should be added to bring the paths of progress up to Chiropractic:

Yet still he seemed dissatisfied,
He wore an anxious mien;
For yet, withal, his patients died!
He fixed not the machine!
Ah! He learns the cause—
Luxations to adjust—
And now he deals with Nature's Laws,
In Chiro puts his trust—
A Healthy-path.

And evermore he is the one
That overcomes the ills,
Known now to be but accidents,
That pain the body fills;
He finds the cause, nor air nor sun,
But bones just out of place;
With Chiro hand the work is done,
Disease then leaves no trace—
A Chiro-path.

B. D. STILLMAN, Chicago, Ill.

A PHILOSOPHY GROWS AS ITS CO-RELATED DISCOVERIES AND INVENTIONS INCREASE

No science bursts forth complete on its first formulation. It must make its slow advance from fact to theory and hypothesis, thence back to more facts to be explained by the same theory, or as amended or new theory.

No science is ever a completed one, because new facts, new relations, and new phenomena are forcing themselves upon consciousnesses, seeking for classification and explanation in conformity to the laws under which they exist.

COMPARISON.

Science

is Classified, Systematized
Knowledge.

It consists of the description and formulation of phenomena and their causal relations. *Science is knowing.*

Art

is Applied Knowledge.

It is the systematized adaptation of means to *ends*. To satisfy man's Needs and Desires. It is Nature affected by man's will for specific ends. *Art is doing.*

Philosophy

is the intelligence gained by the relation of the laws which science bears to art and the powers that cause creation, generation, propulsion, transmission and expression, or personification of both. *Philosophy is Intelligence.*

CHIROPRACTIC BRIEFS NO. 2.

We need wide-awake, up-to-date Chiropractors.

The history of heretics marks the progress of humanity.

Art and Science have no enemies but those who are ignorant.

The advancement of the world was never made upon sandy bases.

Take away his educated senses by impingement and he is an imbecile.

Ambition is torment enough for an enemy. Success makes him rage.

The supreme use of our ideals is to have a noble purpose and to stick to it.

The man who has ideas can tell them. It does not take an English scholar to tell what he thinks.

Be comprehensive, yet concise. Brevity insures lucidity. Chiropractic is all of the above.

The adjusting of the cause of disease ought to be substituted in the place of treating the ailment.

All sciences are rapidly advancing. The impossibilities of today are being made possible tomorrow.

Man cures nothing. Innate does the restoring when able to perform functions in a normal manner.

The entire assortment of drugs are injurious to mankind. This is becoming patent to people generally.

The large-souled man may be both blessed and cursed, but scorn and approval does not change his purpose.

A good idea poorly and bluntly expressed is of more value than a teacher having no ability to tell what he don't know.

Call it persistence, tenacity, perseverance—call it what you will—it is the touchstone that brings out all the best forces.

The time is at hand when the cause of diseases will be adjusted. The treatment of effects will soon be a thing of the past.

Medical men have searched the world for remedies, desiring an antidote. Chiropractors find the cause in the person ailing.

Science is knowledge; art is manifested in the ability we have of using that knowledge. Analysis includes both science and art.

It is character that counts. Wealth, position and education without it but make weakness the plainer and individual defects the more glaring.

It is *the people* who think and suffer, who aspire and persevere; they are the ones who originate, develop and carry forward all real progress.

Taking the temperature, pulse, respiration, examining the tongue, feces and urine, does not locate the displacement of the bony framework.

"Whatsoever a man soweth *that* shall he also reap." *Wheat does not grow from sunflower seeds, nor morning glories from grunts and groans.*

The old idea, that of treating effects, is built upon educational intensified ignorance.

A person may be very intellectual, but, handicapped by deafness, loss of sight, or when he "has a cold," he appears and feels a little off, in fact, dull.

A Chiropractor *analyzes* the effects of disease to cause. What would be the most appropriate name for a lady Chiropractor? Ann Elizar (Analyzer).

Many children, because of some prenatal or postnatal defect, study to a disadvantage as the result of nerve impingements, which derange functions.

The Chiropractor readily traces tender, sensitive nerves from the affected part to the displaced vertebra in the spine where they are impinged, and vice versa.

Strong characters are calm and deliberate. They can hurry and be noisy, if need be in an emergency, but they usually forestall emergencies by forethought.

The American Post-Graduate School says of Chiropractic: "This is not Osteopathy, but a new science of manipulation relieving nerve strain."

To contend, to wrestle, to find occasion for putting forth our strongest efforts; these are what bring both the man and the nation to their fullness and completeness.

Moses had our "spontaneous life" scientists beaten to a finish when he, without "culture," covered the land of Egypt with lice and frogs, fully developed, in one night.

I hold it true that thoughts are things
Endowed with being, breath and wings,
And that we send them forth to fill
The world with good results, or ill.

Chiropractic analyzes effects, thus proving its cause. Medical men and Osteopaths always diagnose effects to give them a name; the medicine or treatment is given accordingly.

When we have divested Innate Intelligence of the mysteries with which ignorant men have invested it in the past, we will then be on the unobstructed road to intellectual progress.

Chiropractors adjust displacements of the bones, relieve pressure from nerves so that they can perform their functions in a normal manner. Then Innate can and will do the rest.

The professional theologian has always been the greatest enemy to the progress of theology. The professional doctor has always been the worst enemy to the progress of medicine.

Watch the man who readily agrees with you. Put him upon the "suspicious list." He agrees to toady to you or he has no mind of his own, either instance being sufficient to cast him aside.

The new science of Chiropractic uses no drugs nor other remedies for those diseased conditions, it adjusts the wrongs, the displacements that cause those afflictions that we name disease.

Chiropractic Trophic Nerves. Trophic nerves carry impulses which, upon action, convert nutritive substances into cell assimilation. They do not carry nourishment, but act as a converter.

Knowledge applied is success. The man without it complains. The one with it continues to forge ahead. He is not the one begging for state protection. Equal ability meets the same level.

A light pressure on nerves in the intervertebral foramina will cause them to become inflamed, swollen and contracted. Heavy pressure, loss of heat, a lax condition, and a shrinkage of nerves.

The cause of disease has been sadly overlooked and neglected. Chiropractic has opened up this line of new thought which is fundamental to all that is vitally related to the welfare of human culture.

All movable articulations are surrounded by synovial membranes, which secrete a viscid fluid, resembling the white of an egg. Its use is to lubricate the joints and the sheaths in which tendons play.

The demarcation between instinct and reason is speculative. Instinct has been defined as "subconscious memory," a remembrance of the way things have been done during many previous generations.

"Vibrators." The question comes at once to a Chiropractor, "Is it possible to adjust a complete displacement, or a subluxated vertebra with a vibrator? If not, what use has a Chiropractor for a vibrator?"

Chiropractic is not quantity, but quality. The Osteopaths average a hundred moves in each treatment; whereas, Chiropractors give one adjustment instead. Osteopathy is general. Chiropractic is specific.

First, obey your conscience; then the laws made by man. The highest form of obedience is to one's own convictions of right and wrong. Whenever the dictates of conscience conflict with law, disobedience becomes a virtue.

The Chiropractor desires Light instead of Darkness; Reason in place of Superstition; Science preferred to Tradition; Investigation and Enlightenment better than Credulity and Ignorance; Liberty than Slavery; Justice not Privilege.

The world evolves around the actions of man. His success depends upon vitality and power. He must have health to accomplish this. Backbone must be normal. Chiropractors, when generally supplied, will improve the world's output.

The person who takes a doctor's dope without knowing what it is, what the doctor expects it to do, why it will do it, what it is taken for, and what food or drink is incompatible with it, is a chump.

Physicians have but little confidence in their own prescriptions, so much of it depends upon faith that when they are ailing, and a brother physician prescribes, they prefer not to know the ingredients of the prescription.

"Second childhood" is a lack of mental impulses. The mind's dependence upon nervous structure for self-expression is not complete; a lack of mental coordination; the mind cannot do more than give the distorted messages from Innate or Educated mind.

"Cause and Cure." A cause must be adjusted, corrected, fixed, set right, made right. To "cure" you must treat effects, apply something to the results. Therein lies the greatest transforming value of Chiropractic; it adjusts causes, but does not treat effects.

Death is looked upon as an enemy. It is a transition, a change of residence and conditions. If such did not exist the lot of the afflicted would be awful. The passing from this stage of existence to another is a blessing. If there were no death, there would be no need of the Christian religion.

The practitioner and the layman are not to blame for using the words "treat" and "treatment," for they have known nothing else but the various methods of treating. Chiropractors do not *treat* the goitre. They find the cause and take off the pressure from the nerve, whose functions are exaggerated.

Different symptoms present themselves in different persons from the Chiropractic subluxation. The same symptoms may be present in different people from different subluxations. Therefore we cannot make a chart, key or index giving "Chiropractic centers. A student must learn to trace affected nerves from the diseased portion to the place impinged or vice versa.

Hill, the noted railroad man, was asked what studies or work he would advise a young man to take to make a success. "Do as I did, go into something today that is scorned, scoffed and ridiculed, when you are my age it will be the success of the world, then you will be a top-ringer," was his reply. Go into the wilderness, start a town, in twenty years you will be its mayor and largest property holder.

Freedom, faith and fun are the great tonics of life—freedom to act and think, faith in your own powers and faculties and in the great laws of the universe, and with all a wide open door for fun and frolic. Don't go glooming through life, afraid of your shadow, but stand straight, hold your jaw up and break into a broad smile or a regular donkey guffaw once or twice in a while.—*Soundview*.

In arthritis the joints are overheated, the synovial fluid thickened, osseous material deposited under the articular cartilage on the surface of the bone. These conditions cause the grating feeling and sound so often heard and felt in articular rheumatism. The cause of this annoyance is found by Chiropractors and adjusted. The urate of sodium is removed and the joint is made smooth and slippery.

Innate Intelligence can be compared to the controlling power of a ship. The engineer is the brain who puts into action that power. The assistant engineers, oilers, repair men and firemen represent the various functional lobes. The machinery exhibits the bodily organs under control of Innate. The captain on the bridge illustrates the educated mind, directing the course and outside affairs of the ship.

As protoplasm is a product of the intellectual chemical elements of the "slime of the sea," as animalculæ evolve in and from stagnant water, vermin from the cheese or cadaver, without the aid of artificer or designer, so cosmic bodies evolve in the course of time from the matter composing and surrounding them. The extraneous intellectual agency is needed and the God creation hypothesis is rational. Evolution explains the rest.

Every true Chiropractor that uses specific, pure and unadulterated Chiropractic should hold in his mind that success is as much his right as the acorn has to become an oak or the rosebud a rose. He was taught to succeed. Successful methods are given to him in his lessons. He has but to place himself in right relations with these teachings and pay the price of effort. Begin to deviate from true principles and you will lose.

"No man is fit to win," says Bulwer, "who has not sat down alone to think and who has not come forth with purpose in his eye, with cheeks white, with lips set, with palms clinched, able to say 'I am resolved what to do.'"

Furthermore, trials instead of begetting in us, even for a moment, a mood of depression ought to be received with gratitude, inasmuch as they furnish us the means of character development without which we ever remain mere playthings of events.

Nature lifts millions of tons of water daily and carries it out over the land and distributes it. It shoots enormous thunderbolts through space and easily whirls the great planets around through an area unknown and uncomprehensible to the human mind. She upsets cities in one hour, buries others with the debris of volcanoes in a day, creates new islands where before there were none; yet I read in the advertisements that *Dudnicker's Little Liver Pills* are necessary "to assist Nature."

It is no easy matter, indeed, when one has reached maturity, especially if there are others dependent on him, to change his occupation or profession. One must think many times before giving up a certainty for an uncertainty, a salary or sure income for an expectation. It calls for moral courage and strength of will and purpose to brave criticism and ridicule and the risk of failure, but for the one who is sure he has discovered his real bent—if he would do his best in life—there is no choice but to make a change.—*Success*.

"Mind is the intellectual, the rational faculty in man or beast; the understanding; the intellect; the power that conceives, judges, or reasons." To use this mental capacity, whether inborn or cultivated, is to think. This process forms the mind.

Mind is the product of thinking. Thought is not produced by the mind, it is the result of brain action. To produce it by using the brain, is to employ one of the functions.

Behind all is Innate, who uses the brain to produce thought. Innate does the thinking, using its mind or intellect.

Stick to your own gifts; insist upon your own talent; be absolutely loyal to yourself; don't let others tempt or persuade you to abandon the calling your soul tells you is yours. Be true to your own convictions if you hope to develop the progress in life: The thought, dreams and inspirations that come to you are yours—they belong to you by the law that governs your particular existence. The dreams and aspirations someone else has for you do not belong to you if they conflict with what your intuition tells you is your calling. Don't try to adjust your eyes to another; you can't do it.

The hands contains twenty-seven bones, the foot twenty-six. The extra one in the hand being the pisiform; so named because some one thought it resembled a pea in shape.

In the adult it is about an inch by five-sixteenths in diameter, spheroidal in form and articulates with the cunifform. Its outer surface is anterior and rough for the attachment of muscles.

Its whole size projects anterior of the other seven bones of the carpus, or wrist, and is situated on the ulnar side, on the outer and front.

The position and eminence of the pisiform makes it suitable for the Chiropractor to use while giving vertebral adjustments.

Chiropractic Calorific Nerves. Calorific nerves convey impulses from Innate brain to tissue cell. Its impulses is the spark which ignites combustion of materials previously placed at each cell. It can be aptly compared to the motor and gasoline. The gasoline passes through its carburetor forming a gas, which enters the cylinder, here to meet the electric spark (nerve impulse) making combustion. The heat of the body (the spark of the engine) is regulated by the quantity of impulses. Base of supply (cells of brain) is unlimited, the expression being determined by freedom of nerves leading from one to the other—if there be pressure, how many impulses are obstructed or how great it intensifies the function.

It takes courage to strike out into new fields on a mere conviction that one can do a certain thing, or is fitted for it. It takes courage to get out of one's beaten track and launch into untried paths, no matter how tempting they may be. If the new field is more pretentious than the one we are already in, and presents more difficult problems and duties, it requires especial courage to make the change. It takes courage to start out even when one hears the call, when there is a possibility of having to turn back and be laughed at, or to receive stinging criticism. It takes courage to give up a salary which enables one to support an aged parent, or to help a dependent brother or sister, and to enter untried fields which for some time may not offer any reward, while one must still struggle to fulfill his moral obligations.

"I ben meditatatin' today," said Uncle Ellery, "how is it that the maple tree in my door-yard learned the game. Instead of droppin' the seed down to the ground, it provides each seed with little wings that carry it some distance on a kind of whirlin' principle.

"Who told that tree if its seed fall straight they would choke each other, or be choked by the old tree's roots, or it was too shady a place to germinate in?

"The university botany chap said it was evolution. But I can't git it out of my fool noddle that this world is *run by intelligence*.

"If there is intelligence at work, in trees, it don't seem as if we ought to worry about things, does it?"

Do you believe anything could learn without intelligence, or could teach without intelligence?

"Bad indigestion leads to nervousness, sleeplessness, irritability, brain fag, ill-temper, insanity. Osteopathy cures sick stomachs and perfects assimilation which makes pure, rich blood and strong nerves."—*Journal of Osteopathy*.

Bad digestion causing other diseases is Osteopathic. One disease producing another is Allopathic. In etiology the Osteopaths and medical schools agree.

Chiropractors find that the above ailments are effects, not caused by each other, but from nerve impingement.

It is the business of the Osteopath to make "pure, rich blood and strong nerves." The Chiropractor is concerned in finding the cause of disturbed functions, removing pressure from nerves to allow them to perform their several acts undisturbed.

In pathology the Osteopaths agree with the medical schools. The Chiropractors do not coincide with any of them.

Henry S. Bunting, A. B., D. O., says in *Medical Talk*: "None but the Osteopaths teach the art and science of examining the back."

According to A. T. Still, the founder of Osteopathy, not more than one per cent of their examinations are done on the back. The Chiropractors make a special examination of the spine for 95 per cent of diseases. The osteopaths are especially interested in blood and lesions as causes of disease. The Chiropractors are spine specialists.

"To those who have defective throats, a soreness, an itching, hoarseness, ulcerated tonsils, or quinsy, osteopathy appears as a sure and safe remedy; it is the treatment par-excellence for all *circulatory* disturbances."—*Journal of Osteopathy*.

Osteopathic literature states that diseases of the throat are due to disturbances of the circulating fluids. Chiropractors find that the portion affected is inflamed, over-heated, caused by nerves being impinged on the right side of the spinal column.

Wherein is there any likeness or resemblance between the two sciences?

There are one, two and three-story men. The men who "think perhaps," "imagine," "guess," are the first named. Two-story men reason about facts. Three-story men are those who are described as inspired.

The majority of men are in the first grade. They do and think little for themselves. They are awaiting the word of command, for an invitation. They think predigested thoughts, have capsule ideas and tabloid opinions.

The second-grade are those so-called teachers, exploiters, grafters. The kind that try to sell adulterated goods. The do-as-I-tell-you kind, "go-for-'em fellers" men. When found they are always sheltered in some easy, comfortable nook, and afterward strut around with the silk hat, claiming victories for that which they have lost but don't know it.

The third-grade man takes off his coat, rolls up his sleeves and says, in a quiet, convincing voice, one that carries weight, "Come on, boys!" plunges into the thickest of the fray; whose very presence is an inspiration of honesty, for he has it himself. He is the salt of the earth, the kind with initiative and courage—that dares to do right because it is right to do right. He is "inspired" because he exemplifies his inner convictions.

Now and then articles appear in various magazines that border on ideas that *The P. S. C.* has been preaching for years. The following is quoted from "*Harmsworth Self-Educator*," Vol. I, No. 2:

"Where is the center, where the directing power that starts the engine and moves the machinery in perfect rhythm, all unconsciously to its owner, who has, as we all know, but scant power to interfere with any great vital processes, and none at all to direct them? This is the very point on which some many of our text-books are silent and, therefore, fail to give us in all their descriptions a true conception of a human being, and are wearisome and dry, because the living soul, the vital spark is absent.

"Some governing center must regulate, control, counteract, guide and arrange and unify the actions of the human organisms with regard to the continual succession of differing events, foods, surroundings and conditions which are ever affecting it in endless succession, and in constant variety enabling it amid this bewildering multiplicity of changing influences, to hold on its steady course of growth, health, nutrition and self-maintenance with the most marvelous accuracy."

MODERN MEDICINE.

First they pumped him full of virus from some mediocre cow,
Lest the smallpox might assail him and leave pitmarks on his
brow;

Then one day a bull-dog bit him—he was gunning down at
Quoque—

And they filled his veins in Paris with an extract of mad dog;

Then he caught tuberculosis, so they took him to Berlin
And injected half a gallon of bacilli into him;
Well, his friends were all delighted with the quickness of the cure,
Till he caught the typhoid fever, and speedy death was sure;
Then the doctors with some sewage did inoculate a hen,
And injected half its gastric juice into his abdomen;
But as soon as he recovered, as, of course, he had to do,
There came along a rattlesnake and bit his thumb in two;
Once again his veins were opened to receive about a gill
Of some serpentine solution with the venom in it still;
To prepare him for a voyage in an Asiatic sea,
New blood was pumped into him from a lep'rous old Chinee;
Soon his appetite had vanished and he could not eat at all,
So the virus of dyspepsia was injected in the fall;
But his blood was so diluted with the remedies he'd taken
That one day he laid down and died and never did awaken;
With the Brown-Sequard elixir though they tried resuscitation,
He never showed a symptom of reviving animation;
Yet the doctor still could save him (he persistently maintains),
If he could only inject a little life into his veins.

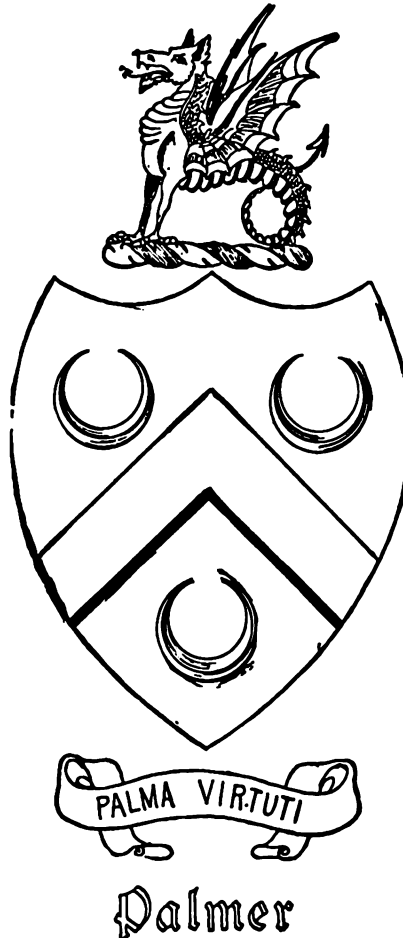
—E. Frank Lintaber, in *Puck*.

THE PALMER FAMILY.

The first to receive the name Palmer was Sir Ralph le Palmer. Having distinguished himself in single combat against the Saracens in the Holy Land, he received knighthood on the battlefield by the surname.

Henceforth he bore the palm branch. It was, indeed, as a palmer that he had gone to Palestine. There was a distinction between palmer and pilgrim. The palmer was a devotee. He spent all his time in the Crusade or visiting holy shrines. A pilgrim returned to his usual life as soon as his particular expiatory journey was finished. The pilgrim laid aside his palm and cockle-shell; the palmer never discarded them. He also wore a black mantle, with St. Peter's keys wrought in red upon the shoulder.

The origin of the name must, therefore, always be consecrated with memories of high and holy purpose. The word "palmer" soon passed into literature. "My scepter for a palmer's walking staff," says Shakespeare.



"Where Do the Palmers Lodge, I Beseech You?"

"Where do the Palmers lodge, I beseech you?" was considered an appropriate line to use upon the invitations sent to some four thousand Palmers for the first meeting of the family association. This was in 1879, 250 years after Walter Palmer, the pilgrim, came to the New World, and the meeting place was the site of Walter's home in Stonington, Connecticut. Processions, orations, poems, songs, toasts and feasting made up the program for the day. It was not a solemn occasion, one for weeping at the tomb of dead and gone ancestors, but quite the contrary. The late Courtlandt Palmer, of New York, started the fun by referring to the tradition that "Our common ancestor, Walter, was nine feet tall and lived to be 150. He came over with Pilgrims in Her Majesty's ship, Mayflower, and landed on the top of Plymouth Rock. Whether fact or fiction, it was related of Walter that he, like others of his day, gave the Indians trash, gew gaws and beads for lands in place of cash.

Walter's wife was Rebecca Short. She first appears upon the pages of the family history clad in a simple, homespun gown, with shining braids of hair, flashing her beauty upon Walter's rugged face, "till words and smiles and blushes inter-blending, had then, as now, the same delicious ending"—a wedding. This is simply a quotation taken from the family history.

Ulysses S. Grant, a Palmer.

Ulysses S. Grant was a lineal descendant of Walter Palmer. Palmer blood flowed in the veins of four governors, cabinet members, jurists, doctors and ministers who have been famous in their time.

Walter was not the first of the name in the New World. The pioneer was Wm. Palmer, who came over in the *Fortune* in 1621, the next ship after the *Mayflower*.

The Palmer Patriots.

Joseph Palmer trampled the Stamp Act under his feet (figuratively speaking, of course,) and spurned old England's tax in tea. He was a member of the Provincial Congress of 1774. He started out in the war as colonel and ended as brigadier general. Deacon Stephen Palmer signed the association test, as it was called, binding himself, at the risk of his life and fortune, to oppose the hostile measures of the British.

The family has its tale of romance. Ichabod, the fourth of Walter, and the tallest, strongest man in town, dashed through the waves of Narragansett Bay on his trusty horse and carried Betty Noyes away despite parental wrath and strategy.

The Palmers of note are legion, but in a brief sketch it is only possible to mention three or four. Samuel Palmer was one of the few really great English etchers. John Palmer was the originator of the guarder coach for carrying the mail; before this Great Britain suffered continual losses from highway robberies of mail coaches. One of the greatest bridge builders in the United States was Timothy Palmer, who lived about the middle of the eighteenth century.

Representatives of the family in England are Sir Roundell Palmer and Dr. Edward Palmer, professor of Arabic at Cambridge, and one of the first Oriental scholars in the world.

Representatives in America.

Representatives in America are Daniel David Palmer, discoverer, and son, B. J. Palmer, developer of that philosophy, Chiropractic. The latter is one of the few great thinkers who had the determination to advance a line of thought, continue to develop it, independent enough to make it recognized as a science. Mrs. Potter Palmer, of Chicago, is a typical social leader of the New World. One of the first in wealth in Chicago. The Palmer House was so named after that branch of the family.

Coat of Arms.

Forty-five coats of arms have been granted to the Palmer family at different times. The one reproduced was Geoffrey Palmer's. He was created baronet in 1760. The arms are sable, a chevron, between three crescents argent. It is to be noted that the crescents are on gules, and point upward to a winern or dragon. Palmer mottoes, "Palma virtuti." Another favorite is, "Palman qui meruit ferat"—"Let him who has won it bear the palm."

HISTORY OF CHIROPRACTIC.

Chiropractic was discovered in 1895 by D. D. Palmer, although B. J. Palmer has, since, developed this science until now Chiropractors are justly proud of it. Chiropractors find that all diseases are caused by subluxations of the vertebral column, which impinge the nerves. When they are free to act naturally in their entire course, there is health. Chiropractors definitely locate the displacements that are the cause of disordered conditions. When these subluxated points are replaced and the pinched nerves freed, there is no longer abnormal function.

The medical world has long recognized subluxations of the spinal column accompanied with fracture, but has always insisted that it was almost impossible to displace a vertebra without fracture. The M. D.'s wrenches and sprains of the back are Chiropractic subluxations.

Many a mother and her child have been injured at delivery by displacements of some of the fifty-two articular joints of the spine. It is the Chiropractor's business to replace these, thereby freeing the impinged nerves so that they may perform their normal function.

The fundamental principles of Chiropractic are founded on anatomy, pathology, physiology and nerve tracing.

Physicians who give us fifteen minutes' attention while explaining Chiropractic subluxations by the use of specimens at hand, admit that there may be many diseases arising from the displacements of the vertebral column. But our being able to replace them by hand is very much doubted until demonstrated; one practical exhibition removes all doubt.

The spinal column is the central axis of the skeletal frame. It supports the head and ribs, and through them the weight of the upper extremities. The weight is transmitted downward to the ossa innominata through the bodies and the articular processes of the vertebrae. It is an elastic structure composed of bony segments, between which are interposed elastic fibrous cartilages called discs.

Flexion, extension, and rotation have a normal limit; to a certain extent they are permitted in all parts of the spinal column. These various movements are due to elastic cushions. Wrenches

in many different ways separate the intervertebral and articular cartilages and displace the vertebrae, causing a narrowing of the foramina through which nerves pass out from the spinal cord, deranging the functions of these nerves by pressure.

When we study the anatomy of the spinal column, we no longer wonder at the many subluxations, and are surprised that we do not find more of them. Could we but fancy the main shaft of a machine capable of the various movements and wrenches that the vertebral column is subjected to, we would no longer be astonished when Chiropractors find and show us the vertebrae that are slipped more or less out of place. Is not the human machine much more liable to have its different parts rocked out of their proper position and the resultant consequences more severe than that of the inanimate machine?

The inevitable conclusion is, that the laws of natural philosophy apply to the backbone of the human body much more so than they do to the central shaft of inanimate machines. Such being the case, why not use the same good judgment in adjusting the displacements of the central line shaft of the human body which sustains and gives firmness to the skeletal frame? Why search the world over for an antidote? Why not look for the cause of our troubles within and correct them?

The above questions are answered by Chiropractors, who locate and verify with definite precision the subluxations which cause abnormal functions. This is done by anatomical knowledge of the vertebral column, the finding of sensitive, swollen, inflamed nerves, which are traced by digital examination and sensation from the exit of the spinal foramen to the part affected. By hand adjustment we correct the wrongs which cause disease. We replace the vertebrae in proper position, restoring the bony openings, named foramina, to their normal size and shape. These movements are done by the hands, using the transverse and spinous processes as handles for adjusting.

THE HISTORY OF CHIROPRACTIC.

Chiropractic was discovered by Dr. D. D. Palmer, and developed into a *science* by B. J. Palmer, his son. What is there more for me to say? All that I can possibly do is to relate the *unwritten* history. How, after the discovery by D. D. Palmer, who had been practicing "Magnetic Healing," it was looked upon by the public as a fake, a subterfuge, a talking point, if you please, whereby the Doctor, by claiming to discover something *new*, could help his business financially. They knew not what it consisted of. His patients did not know what he did. How the few personal friends of the Doctor, here in the city, undertook to prove to the public that the discovery of Chiropractic was a wonder and that under Chiropractic adjustments miracles were performed; how they were met with scoffs and sneers;

how they were ostracized from the society of their friends, and were called cranks and fools for being the tools used by Dr. Palmer to further his own personal prosperity. They were not bound by the chains of the monopoly. They were free and independent. They owed no doctor bills and cared little or naught for their sneering and abuse. They wavered not one whit from their course, not to benefit Dr. Palmer, nor for hope of reward, nor fear of punishment; they *did* and are *doing* it still for the benefit of suffering humanity.

They were handicapped at the start from the fact that "Dr. D. D." did not explain or demonstrate anything pertaining to Chiropractic. He deemed it advisable to keep the secret to himself, lest someone would rob him of his glory. It seems strange to us *now* that he did at that time take such a stand; but you must recollect that Chiropractic, as discovered and developed, on that day was as compared to the *Science of Chiropractic of today* as the stage coach is compared with the Pullman palace car. He thought it possible and more than probable that almost anyone, particularly a medical practitioner, could give an adjustment as well as he, did they see the act once performed. So time wore on with seasons of successful adjustments—at that time two or three unsuccessful cases would have upset the reputation gained by two or three months of success. Dr. D. D. Palmer could not successfully determine this essential point; *i. e.*, at what stage of diseased condition a pinched nerve would fail to revive and perform its natural and normal function. Let me illustrate: we find a man being choked by another. One will give the victim a shower bath of warm water; another applies a mustard plaster; the third gives a hypodermic injection, but still the man chokes. The Chiropractic grabs the assailant by the nape of the neck and seat of the pants and throws him in the creek. Very well, the cause is removed, but will he recover; has he been strangled so long that he cannot be resuscitated? A nerve can be under pressure so long or severe that adjustments will not restore the nerve to its normal condition. Dr. D. D. Palmer did not know this and so he made some failures. *Now* the condition is determined upon examination, and such patients are told that they cannot receive their normal condition, and the Chiropractor is thought to be a person who *knows* something.

It has always been strange to me why all of these new discoveries were made at exactly the proper time, when the conditions demanded them. There must be back and behind all an unseen power, which you may call Innate Intelligence, that promotes all actions. When the old world became so densely populated that it became crowded, this power prompted Christopher Columbus to seek a *new world* across the then trackless sea for the overflow of the human family.

This same agent was manifest when it became necessary to flash intelligence across the continents, and Franklin and Morse were given this mission to perform. When it became necessary

for rapid transportation of food products, young Watt was stopped at his mother's kitchen stove and tried to hold the cover on his mother's tea kettle; thus was the power of steam discovered. So after years of various methods of relieving pain and distress by sacrifices, burning oils and chemicals, prayers and incantations, herb teas, drawing the life's blood, administering vegetable and mineral poisons into the stomach, the human faculty becoming weaker and weaker, superstition and prejudice practically obliterated, the season was ripe and to Dr. D. D. Palmer was given the mission of discovering the *cause of diseased conditions* and to start a crusade in the interest of humanity; but like Columbus, Franklin and Watt, he seemed satisfied with the glory of the discovery, and, as is always the case with new discoveries and inventions, someone else had to *develop*. So in this case, when "Dr. D. D." laid down the burden, because it had gotten too heavy for him to carry, a stripling of a boy took up the load and said to these friends of his father, "Now, boys, if you will give me the aid you tried to give 'D. D.,' we will demonstrate to the world that Chiropractic is *a science*, and make it so plain that any man, though a fool, cannot err therein. I will tell you all the basic principles of Chiropractic, so you can discuss the subject with any you may come in contact with, even a medical doctor, successfully." How well he has succeeded, you all know. He has kept steadily on, night and day, until now, behold Chiropractic in the fullness of its glory. No longer looked upon by the public as a fake, but it stalks boldly forth over land, from ocean to ocean, yea, into far distant lands, across the seas, strewing wreaths of flowers, a wealth of sunshine, along its path, a hope to the afflicted, new life to the paralytic and a glamour of light in the darkened chamber of death; the sun in its mission of furnishing heat and light to the earth ever shines upon some Chiropractor. The public now fear it as some unconquerable giant. Why? Only lest it deprive some of themselves or friends of the pecuniary benefit derived from administering or dispensing drugs and poisons. They would sacrifice the *life* of themselves, family or friends rather than gain the enmity of the drug dispenser or the medical doctor. Strange as it may seem to you, I have known instances where they have, under the aid of a law, lobbied through the legislatures by a certain school of practitioners, protected themselves in using a prescribed method for relieving pain, which they think cannot, and which, if they can present, will not be improved. You may live or die, but you must follow the path they have marked out. Why is this law allowed to stand on our statute books by a Christianized and God-fearing people? Is it for the purpose of alleviating pain and suffering? Oh, no! It is for the purpose of defending and protecting those who are engaged in the business of administering and dispensing poison and are clothed with the lawful power of using the instruments of torture, lancet, knife, and are willing to sacrifice anything and everything, no matter how cruel—their business must be pro-

tected at all hazards. How long will the people tolerate these indignities? Only so long as they can be blinded. How can this yoke be thrown off? Only by demonstrating Chiropractic. I hope to live to see the day when anyone sticking a knife into a human being he or she shall be amenable to the criminal law, whether he or she has a diploma from a medical college or not; when everyone who administers poison to another shall suffer the same penalty whether it is done behind a 6 x 8 diploma from a medical school or did such with murderous intent by a jealous or insane crank, or for a fee regulated by law or done for the mere desire of revenge.

HOWARD NUTTING, Davenport, Iowa.

THE FIRST CHIROPRACTIC PATIENT.

This is an excellent likeness of Harvey Lillard, the first person who received a Chiropractic adjustment.

Magnetic healing was, for nine years, the forerunner of Chiropractic, although not used as others, who slapped and rubbed. The aim was to locate in the patient the cause of each disease.

To illustrate, it was decided that all diseases of the throat, such as goitre, croup, diphtheria, bronchitis, quincy and tonsillitis, had their origin in the region of the stomach. Under the science of Chiropractic it was ascertained that the nerves of intervention of the stomach emerge from the left side of the spinal column and those which produce the above diseases by deranged functions proceed from the right side. The nerves of the stomach only may be impinged, but usually when there is a subluxation of the vertebra, so as to impinge nerves on one side, they also impinge those on the opposite.

On Sept. 18, 1895, Harvey Lillard called upon Dr. Palmer. He was asked how long he had been deaf. He answered, "seventeen years." He could not hear the rumbling of a wagon upon the street. Mr. Lillard informed the doctor that at the time he became deaf he was in a cramped position and felt something give in his back. Upon examination there was found a displaced vertebra, one that was not in line. Dr. Palmer informed Mr. Lillard that he thought he could be cured of deafness by fixing his spine. He consented.

Two adjustments were given, which replaced a vertebra, freeing nerves that had been paralyzed by pressure. This explains why so many persons "have been deaf ever since they had the measles," which was the acute stage, the deafness being the chronic.

Since relieving Mr. Lillard of deafness, we have learned that this affection may be caused by subluxations of the other vertebrae. In some persons it is a prenatal cause, which cannot be improved by adjustment.



HARVEY LILLARD.

Chiropractors, by one or two adjustments, replace displaced vertebrae which cause acute diseases. Without an acute stage, there cannot be a chronic. If the displacement which causes excessive heat and rash was replaced before the crisis, there would be no such complications as diphtheria, croup, lung affections and deafness.

Mr. Lillard can hear as well today as other men.

CHIROPRACTIC FOUNDED ON PRINCIPLE.

We look upon the giant locomotive as a thing of strength and beauty, and charmed with the Herculean power of locomotion it can be hurled over the rails at the rate of 100 miles per hour, carrying its freightage of human life. Yet, after all, the secret of its momentous force lies in a simple principle; the steam, alternately forcing the piston rod backward and forward, causes the revolution of the ponderous drive wheels to which it is connected. Chiropractic, like the locomotive, demonstrates principle—unique adjustment.

Giant strides have been achieved by inventive genius, but little has been done in adjusting displaced vertebrae until within the last few years.

Chiropractic is rational, because automatically correct, the removal of pressure opens the intervertebral foramina, thus the nerves respond to normal function and the patient is freed from disease.

It is practical, because it strikes directly at the root of the trouble and, therefore, removes the physical representative of the cause.

Chiropractic Adjustment Quickly Given.

A Chiropractic adjustment is quickly given, thus enabling one to adjust hundreds of patients daily, multiplying his usefulness for the relief of suffering humanity.

The illustration so often repeated impresses one with the truth and virtue of Chiropractic. Let us for a moment fancy a dwelling with an opening in the roof where the water trickles from every rain, destroying its furnishings. The owner applies varnish and secures new furniture and carpets, only to find that each storm causes the same sad havoc. Why does he not secure the services of a carpenter to fix the leak in the roof?

Again, let us imagine the man whose wife is suffering from typhoid fever. He secures the services of a competent Chiropractor, one who removes the pressure on nerves which cause this disease. After a few adjustments she is well. Think of the common sense in remedies which only relieve for a time and are powerless in adjusting subluxated vertebrae, which is not only the cause of typhoid fever, but the category of disease.

Chiropractic Rays of Light.

It is interesting and instructive to notice the various opinions of medical writers in regard to subluxations of the vertebral column, and *how near* they were to that which is now known as Chiropractic. Below are given extracts from standard anatomists and orthopedical books.

A Chiropractic subluxation is the partial displacement of articular surfaces of the fifty-two spinal joints, and is not usually accompanied with fracture. The replacing of these subluxated vertebrae are readily accomplished by a Chiropractor. When we refer to Chiropractic subluxations of the spinal column, we speak of those which have been only partially displaced in the articular processes.

Medical writers usually refer to complete luxations of the vertebrae—they know of no other. Such rarely occur without fracture and instant death is the usual result. In this we fully agree.

Samuel Cooper.

Samuel Cooper says, "Every kind of joint is not equally liable to dislocation. Experience proves, indeed, that in the greater part of the vertebral column, *luxations are absolutely impossible*, the pieces of bone being articulated by extensive, numerous surfaces, varying in their form and direction, and so tied together by many powerful, elastic means, that very little motion is allowed. Experience proves, also, that the strength of the articulations of the pelvic bones can scarcely be affected by enormous efforts, unless these bones be simultaneously fractured.

"The large surfaces, with which these bones support each other, the number and thickness of their ligaments, the strength of their muscles, the little degree of motion which each vertebra naturally has, and the vertical direction of the articular processes, make dislocation of the dorsal and lumbar vertebrae impossible, unless there also be a fracture of the above mentioned process. Of these cases I shall merely remark, *that they can only result from immense violence*, that the symptoms would be an irregularity in the disposition of the spinous processes, retention or continuance of the urine or feces, paralysis, or other injury, to which the spinal marrow when the spinal marrow has merely undergone a violent concussion, without any fracture or dislocation whatever; and it is certain that most of the cases mentioned by authors as dislocations of the lumbar and dorsal vertebrae have only been concussions of the spinal marrow, or fracture of such bones.

"The os occipitis and first cervical vertebra are so firmly connected by ligaments that *there is no instance of their being luxated* from an external cause, and *were the accident to happen, it would immediately prove fatal* by the unavoidable compression and injury of the spinal marrow."

Delpach.

Delpach asserts, without qualification, that a careful examination of the form and situation of the bones of the spine must convince the observer that such accidents as displaced vertebrae cannot occur.

J. L. Petit.

J. L. Petit tells of a child being instantly killed by being lifted by the head.

C. Bell.

C. Bell, after relating a case, remarks: "Patients can hardly be expected to survive a mischief of this kind, when the transverse ligament is broken, and the process dentatus is thrown directly backward against the medulla oblongata, *the effect must be instant death.*"

Dupuytren.

Dupuytren cautions the future Chiropractor in regard to spinal dislocations in the following language: "*The reduction of these dislocations is very dangerous, and we have often known an individual to perish from the compression or elongation of the spinal cord, which always attends these attempts.*"

Howe.

Howe expresses the same warning when he says, "*Death has occurred from attempts to effect reduction in cases of vertebral luxations.*"

A. Cooper.

A. Cooper says, "In the spine, the motion between any two bones is so small that *dislocation hardly ever occurs*, except between the first and second vertebrae, although the bones are often displaced by fracture."

Kirkland observes, "There are some luxations which are far worse injuries than fractures; of this description, the dislocations of the vertebrae, cases which, indeed, *can hardly happen without fracture, and are almost always fatal.*"

Stimpson.

Stimpson refers to "The possibility of the occurrence of *pure dislocation* of the lumbar vertebrae, which has long been in doubt because of the close interlocking of the processes and the strength of the ligaments, is *proved* by two cases collected by Blasius, and also by two others, in which there was present associated, but unimportant, fracture of some of the processes."

The same author, speaking of dislocation of the atlas, from the axis, says, "Dislocation forward or backward is possible only after fracture of the odontoid process, or rupture of the trans-

verse ligament, or by the slipping of the process beneath the ligament."

McClellan.

McClellan, in his *Regional Anatomy*, Vol. 2, gives his opinion of vertebral dislocations in the following language: "*Dislocation of the spinal columns is especially grave. A simple dislocation of any of the vertebrae can happen only in the cervical region, as the construction of the dorsal and lumbar vertebrae is such that a dislocation necessarily involves a fracture of some part of the bone.*"

Gerrish.

Gerrish sums up the question by saying, "*Simple dislocation between two vertebrae is, therefore, almost impossible, unless perhaps in the cervical region, where the surfaces of the articular processes are more nearly horizontal.*"

Lawrence.

Mr. Lawrence says, "The possibility of the occurrence of complete dislocations of the vertebrae without fracture has long been a disputed point among many of the first surgical writers."

Gray.

Gray asserts, under the head of surgical anatomy, "The ligaments which unite the component parts of the vertebrae together are so strong, and these bones are so interlocked by the arrangement of their articulating processes, that *dislocation is very uncommon*, and indeed, unless accompanied by fracture, *rarely occurs*, except in the upper part of the neck. Dislocation of the *occiput from the atlas has only been recorded in one or two cases*; but dislocation of the atlas from the axis, with rupture of the transverse ligament, is much more common; it is the mode in which death is produced in many cases of execution by hanging. In the lower part of the neck—that is, below the third cervical vertebra—dislocation unattended by fracture occasionally takes place."

Erichsen.

Erichsen says, in his first edition, "On looking at the arrangement of the articular surfaces of the vertebrae, the very limited motion of which they are susceptible, and the way in which they are closely knit together by strong ligaments and short, powerful muscles, it is obvious that *dislocation of these bones must be exceedingly rare*. So seldom, indeed, do they occur, that their existence has been denied by many surgeons. Yet there are a sufficient number of instances on record to prove incontestably that *these accidents may happen*. Those cases that have been met with have usually been associated with partial fracture, but *this complication is not necessary*. In all, the dis-

placement was incomplete, and indeed, a complete dislocation cannot occur.

"Dislocation of the atlas from the occipital bone has been described in two instances only.

"Dislocation of the axis from the atlas is of more frequent occurrence. It may happen with or without a fracture of the odontoid process.

"In the dorsal region, dislocation of the spine, though excessively rare, may occur. The last dorsal vertebra has been several times found dislocated from the first lumbar.

"Dislocation of any one of the five cervical vertebrae may occur. The third vertebra is that which is less frequently dislocated; the fifth that which is more commonly displaced. Treatment of these injuries is sufficiently simple. No attempt at reduction can, of course, be made."

My experience of ten years as a Chiropractor differs materially from that of Dr. Erichsen. I have found the third vertebra to be the most frequently displaced of any cervical. The atlas and fourth will come second in frequency. The seventh is rarely dislocated, owing to its being braced by the clavicle and the first pair of ribs. If Dr. Erichsen could see the ability displayed by a Chiropractor in replacing displaced cervical vertebrae, hear them return to their proper position with an audible crack, he would no longer say, "No attempt at reduction can, of course, be made."

Walton.

Walton asserts, in a late *New York Medical Journal*, that "Cervical dislocation occurs more frequently than is generally supposed, and that the results of the injury are nearly always susceptible of speedy, safe and complete amelioration.

"Three methods of treatment have been proposed: (1) Reduction by traction, with or without abduction, and rotation. (2) Reduction by abduction and rotation, but without traction. (3) Reduction by dorso lateral flexion combined, if necessary, with slight rotation. The last method, in the author's opinion, is the best. The employment of traction is a futile measure. Not infrequently reduction takes place spontaneously, during sleep, at other times it occurs accidentally during the relaxation produced by an anesthetic. In seven cases observed by the author reduction took place as follows: Two reductions occurred in sleep, three during etherization, and two were effected by operation."

Cervical dislocation—partial displacement—is much more common than is supposed by medical men. The replacing of which is safely and quickly done by the hands of a Chiropractor.

Instead of using a machine to stretch the spine, moving the vertebrae from or around its axis, we adjust by hand, using the spinous processes as levers.

Howe.

Howe gives an interesting case which we think worth quoting: "In 1856 I was summoned to an Irishman, who had fallen from a chamber window to the ground, head foremost. I found the patient with his head twisted to one side and rigidly held in that position. He uttered cries of distress and called lustily for relief, 'a stitch in my neck, doctor, a stitch in my neck.' I took hold of his ears and endeavored to pull and twist his head into its natural position, but was unable to accomplish my object. By pressing my fingers into the soft structures of the neck, I could feel a bony displacement to exist between the third and fourth vertebrae, though I was unable to discover the exact nature or extent of the displacement. Perhaps another vertebra was implicated in the displacement. By help of assistants, who laid hold of the patient's head and feet, we made powerful extension and counter-extension, together with some twisting motion, reduction, which was attended with an audible snap, was accomplished. The patient then moved his head and neck with ease and complained no more of sharp pain. He suffered from great soreness in the neck for a week or more, yet recovered without physical defect or lasting functional impairment. *I am quite sure no process of bone was broken; and that the injury was a simple luxation, occurring between two or more of the cervical vertebrae.*"

Erichsen.

Dr. Erichsen declares, "*Dislocation of the articular processes of the cervical vertebrae occasionally occurs. In these cases the patient, after a sudden movement, or a fall on the head, feels much pain and stiffness in the neck, the head being fixed immovably, and turned to the opposite side to that on which the displacement has occurred. In these cases I have known reduction effected by the surgeon placing his knees against the patient's shoulders, drawing on the head, and then turning it into position, the return being effected with a distinct snap.*"

If the victim of the following mishap should read the above two cases, he would feel like directing the Old School to the new method. The following is copied from *The Davenport Republican* of Jan. 1, 1905:

"Frank Runge, who lives at 611 West Sixteenth street, has enjoyed the unique distinction of having his neck dislocated and fixed. One morning he did not arise from his slumbers as soon as his sister and aunt thought he ought to. So they went to his room, and each taking hold of a foot, tried to pull him out of bed. He playfully resisted and in the melee that followed, he managed to displace five bones in his neck. The bones being the atlas, axis, third, fourth and fifth cervicals. The accident was a painful one. Runge's head was so turned that his face looked over his shoulder.

"The young man was carried from his home to a buggy and driven to the office of Dr. Palmer, who realized the trouble at once. After three adjustments he had the neck in as good working order as ever. The cure was as remarkable as the accident was peculiar. Runge feels all right, but has no desire to go through the ordeal again. Next time his sister and aunt try to pull him out of bed, they can pull all they want to,—he will not resist."

The above reduction was made with the hands, using the spinous processes as handles.

The New York Journal of Medicine.

The New York Journal of Medicine for 1852 contains an account of dislocation of the dorsal vertebrae: "The injury was produced by the fall of a door, the man being under it in a stooping posture. The lower extremities were immediately paralyzed. At the seat of the injury, which was at the *junction of the lumbar and dorsal vertebrae*, there was a marked appearance of *displacement of the parts*, which seemed to arise from a fracture and dislocation, on the sliding of the body of one vertebra over another. The surgeon placed the patient on his front, and fastened a folded sheet under his arms and another above his hips; chloroform having been administered, extending and counter-extending forces were applied by means of the sheets, and the various vertebrae were reduced. In six or eight weeks the patient recovered the use of his limbs and normal evacuations took place. Ultimately, the recovery was complete, though *a prominence remained at the seat of injury*."

There are two features in the above case to which I desire to draw special attention. The marked displacement that was visible in the vertebral spines, which the surgeons did not replace, as shown by the last line. Also, in using the folded sheets, in the same manner so freely paraded and described by Dr. O. G. Smith as the Frank Dvorsky method, is not new, nor confined to Bohemians. It is here classed as orthopedic surgery.

Pott.

Pott states a case where no violence had been committed or received, his *first* intimation was a sense of weakness in his backbone, accompanied with what he described as a dull kind of pain, attended with such a lassitude as rendered a small degree of exercise fatiguing; this was followed by an unusual sense of coldness in the thighs, not accountable by a change of weather, and a palpable diminution of their sensibility. After a short time his limbs were frequently convulsed by involuntary twitchings, particularly troublesome in the night; and soon after this, he not only became incapable of walking, but his power, either of retaining or discharging his urine and feces was considerably impaired.

He continues to say, "In the adult I will not assert that *external mischief* is always and totally out of the question, but I will venture to affirm what is equal, as far as regards the true nature of the case, which is, that although accidents and violence may in some few instances be allowed to have contributed to its more immediate appearance, yet the part in which it shows itself must have been previously in a morbid state, and thereby predisposed for the production of it. *I do not by this mean to say that a violent exertion cannot injure the spine, or produce a paralytic complaint; that would be to say more than I know; but I will venture to assert that no degree of violence whatever is capable of producing such an appearance as I am now speaking of, unless the bodies of the vertebrae were by previous distemper disposed to give way; and that there was no supposable dislocation, caused by mere violence, done to the bones of the back, which bones were, before the receipt of the injury, in a sound state.*"

Dr. Ayers.

Dr. Ayers reports in the *New York Journal of Medicine* a case of *dislocation* occurring between the cervical vertebrae from some unknown cause, as the man was intoxicated at the time he received the injury. The neck was rigid and exhibited a peculiar deformity which could not attend any lesion except luxation of one or more of the cervical vertebrae. There was no paralysis; but intense pain attended the displacement. Great difficulty was experienced in attempts to drink or swallow food. The esophagus and larynx seemed to be pressed upon by the bulging forward of several of the cervical vertebrae. The back of the neck was rendered excessively concave and the integument was thrown into folds as it is when the head is forced back against the shoulders, the front of the neck presented a correspondent convexity. *Between the spinous processes of the fifth and sixth cervical vertebrae a marked depression could be felt*, and this was the point at which the greatest distress was felt by the patient. Dr. Ayers, with several surgical assistants, who concurred with him in the diagnosis, performed a successful reduction while the patient was under the influence of chloroform. Extension was applied to the head, and counter extension to the shoulders, and while the head was rotated and pressure made upon prominent points in the neck, *the displaced bones hence returned* to their former position and the head and neck resumed their natural attitude and aspect.

What a time these surgeons had replacing vertebrae! Chiropractors never give chloroform. Dr. Ayers would hardly equal the practitioner of Chiropractic who often adjusts at the rate of one a minute.

That "marked depression" was a coming together of the spinous processes, causing lordosis and the pinching of nerves in the foramina.

Samuel Cooper.

Samuel Cooper remarks: "I believe no modern practitioner now ever advises supporting the spine with machinery, on the supposition of there being any *dislocation*; an *error* which formerly prevailed.

"The cervical vertebræ, however, not having such extensive articular surfaces, and having more motion, *are occasionally luxated*. The dislocation of the head from the first vertebra, and the first vertebra from the second, particularly the last accident, is the most common; but luxation of the cervical vertebræ lower down, *though very rare, are possible*."

Beck.

Beck evidently recognized displacements of vertebrae, for he says, "The most important sight is the traumatic kyphosis, produced by a displacement of the spinous process, whereby a prominence is caused. Sometimes more than one vertebra is concerned."

Dunghlison's Dictionary allows Chiropractic sunbeams to shine on page 1039, under two heads, "Spinal irritation, a supposed erethistic state of the spinal cord, indicated by tenderness on pressure over the spinal process of one or more vertebrae, or over the nerves proceeding from the cord and distributed to the parts at the sides of the spine." "Spinal localization, the designation of a particular part of the spinal cord as the center of certain physiological functions or of muscular movements or reflexes."

Brodie.

Mr. Brodie's opinion, deduced from dissection: "In many instances caries of the spine has its origin in the bodies of the vertebrae themselves, which are liable to the same disease of the cancellus structure, which is noticed in the articulating extremities of other bones. In some cases rest in a horizontal posture, below ground, I believe, must soon be the patient's doom."

Moore.

Moore, speaking of torticollis, says, "Many cases have their origin at birth; the muscles may be torn, *bones may be broken or distorted, nerves may be injured*."

Boyer.

Boyer says, "*Many examples have happened*, in which one of the inferior oblique or articular processes of a cervical vertebra has been dislocated, so as to cause a permanent inclination of the neck towards the side opposite to that of the displacement."

Howe.

Howe makes mention of a similar case, caused by cervical dislocation, and describes it thus: "Some years ago I was called to a lady who had her head drawn forward. The contraction had *wrenched* at least *three of the cervical vertebrae* from their articulations, and greatly distorted two others."

We have observed many persons with a stiff neck, drawn to one side, upon arising in the morning; which they attribute to a draft, or lying in a crooked position. These conditions being acute, and their cause, slightly subluxated articular processes, usually right themselves.

Samuel Cooper.

Samuel Cooper, with a physician's understanding, remarks: "Spontaneous displacements of the atlas may depend upon caries and scrofulous diseases of the articular surfaces, or upon the exostosis of its transverse process, or a similar tumor growing from a neighboring portion of the os occipitis, or petrous portion of the temporal bone. By these causes the anterior or posterior arch, or one of the sides of the atlas, has been made to intercept a third, the half, and even two-thirds of the diameter of the foramen magnum. Notwithstanding the very remarkable construction of the medulla spinalis thus occasioned, life may be carried on, and the nutritive functions performed sufficiently well to afford time enough either for the exostoses to attain a large size, or for the ankyloses, binding together the head and most of the cervical vertebrae, to acquire great solidity. The atlas is never found free and distinct, when thus displaced, but is confounded at least with the os occipitis, and mostly with five or six of the adjacent vertebrae. Another interesting fact is, that, in cases of this description, the joint between atlas and occiput is never the only one which is displaced and deformed, unless the disease be very slightly advanced; for the articulation of the processes dentatus with the atlas, and sometimes that of the point of the same process with the occiput, are considerably affected. Sometimes the processes dentatus and the occiput retain their natural position with respect to each other, and the atlas alone seems to be displaced between them. Sometimes the second vertebra is out of its place with respect to the os occipitus in the same direction as the atlas, but in not so great a degree. Lastly, in some other instances, the two vertebrae are twisted in opposite directions, as, for instance, one to the left, the other to the right, or vice versa."

Cooper.

Cooper states that displacements of the atlas *depend upon* caries, scrofulous diseases of its articular surfaces, exostoses, tumors or an ankylosis. The facts are, as proven by Chiropractic, that by the displacement of the atlas, nerves were impinged in the intervertebral grooves, above and below, thereby deranging

their functions. Remember, that diseased conditions are but effects of maladministration of mental impulses. Instead of some diseased conditions being the cause of others, the above abnormalities are all accounted for by the acts of the mental impulses performed in an irregular manner.

Moore.

Moore says of vertebral displacements, or, as he puts it, spinal distortions, "*Many traumatic cases have their origin at the time of birth; bones may be broken or distorted, nerves may be injured.*"

Tubby.

Tubby gives us a ray of light on this subject when he says: "Osteoarthritis and osteitis-deformans cause a general kyphosis; nor do they give rise to reflected pain, unless it may happen—a rare event, I imagine—that *the nerves are pressed upon as they issue from the spinal canal.*"

He speaks of the "bonesetters" as do many physicians of Chiropractors, when he says, "Such cases drift about until they fall into the hands of the 'Bonesetter,' who, *with one jerk relieves the patient* of his or her disability, and arrogates to himself the credit of putting in a dislocated bone." This remark may look strange sandwiched between the one above and the following, copied from page 81 of his *Orthopedic Surgery*:

"I recently *removed the breast* of a patient, who, having found a tumor which she was afraid might be a cancer, kept the matter to herself for nine months. During this time the growth steadily increased, and in the last two months she had suffered from very severe *pains in the spine* at the level of *about the fourth dorsal vertebra*, and also *around the sides of her chest*. *When the spine was examined, a well marked angular curvature was found.*"

That "well-marked angular curvature" was a projecting spinous process of a displaced vertebra. "About the fourth dorsal" is where we find nerves impinged which produce cancer of the breast. Those nerves can be traced by a Chiropractor from the spine to the affected part and relieved by adjustment.

Still.

A. T. Still wisely states: "A wrench of the spinal column has been given with force enough to slip the vertebral articulations and inhibit nerves. We should remember that slipped or twisted vertebrae must be sought out and adjusted."

Davis.

A. P. Davis, D. O., when describing a cervical treatment, says: "This movement should be done with caution, so as not

to dislocate the neck." He also states, in his work on *Osteopathy Illustrated*, "It was long taught that the dislocation of a rib was responsible for all the mischief; or a dislocated hip, or a *slipped vertebra*, had much to do in producing disease of all kinds; but the intelligent in the ranks of Osteopathy are ready to concede the cause to other sources, and now it is a pretty well settled fact that *dislocation does not play* such a role in the production of disease as formerly."

Bell.

C. Bell speaks of an evident loosening between the last cervical and the first dorsal vertebrae, of a considerable space between them, of the destruction of the intervertebral substance.

Helferich.

Helferich remarks: "In the dorsal and lumbar regions pure dislocation is exceedingly rare. The possibility of true dislocation in the region of the dorsal and lumbar vertebrae *has been proven on the post mortem table*, but must be almost impossible to recognize in the living subject, *i. e.*, it must be difficult to exclude fracture."

We differ very much with Dr. Helferich, for we find dorsal and lumbar dislocation, without fracture, *very common*. Such is demonstrated every day, before the clinic; *we do not have to wait to determine on the post mortem table*. It is not difficult for a Chiropractor to ascertain which vertebra is subluxated.

Erichsen.

Erichsen, in his latest edition, says: "*Partial dislocation may exist, unsuspected, the case being considered one of simple contusion.*"

Sprains, strains, wrenches, and twists *of the spine are of very frequent occurrence*. They may be followed by every possible kind of mischief to the vertebral column, its bones or ligaments.

Sprains or wrenches of the spine will frequently lay the foundation of serious organic disease of the bones and articular structures, leading to angular curvature, abscess, paraplegia, and possibly a fatal result.

One of the most remarkable circumstances connected with injuries of the spine is the disproportion that exists between *the apparent trifling accident* that the patient has sustained *and the real and serious mischief that has in reality occurred, and which will eventually lead to the gravest consequences*.

"Although there is often a long interval between the time of the occurrence of the accident and the supervention of the more distressing symptoms, and the conviction of the serious nature of the injury that has been sustained, it will be found, on close inquiry, that there has never been an interval, however short, of complete restoration to health."

Howe.

Howe admitted a Chiropractic sunbeam when he said, "The dreadful and prolonged sufferings which follow dislocations of the vertebrae are among the worst that can be inflicted upon the human body. All complex horrors of paralysis are liable to follow these luxations, such as bed sores, artificial evacuations of the bladder and rectum, utter dependence upon others to have even necessary wants supplied, and the perversions of the secretions to an extent that renders every phase of life disagreeable and death welcome."

Erichsen.

John E. Erichsen saw the dawn of Chiropractic when he voiced our sentiments, except that he should have used compression in the following, instead of "concussion": "The effects of concussion of the spine, whether arising from violence directly or indirectly applied, are occasionally slow in manifesting themselves to the full intensity; so slow, indeed, that the patient may not connect their supervention with the injury which he had sustained some length of time previously."

Simpson.

Simpson writes unbiased on this subject and gives us a ray of light: "Concerning the frequency of dislocation of the vertebrae, widely different opinions have been held; some denying even the possibility of dislocation without fracture, others think them extremely rare, and others, again, claiming that they are quite common.

"The nerve trunks at their point of emergence through the intervertebral foramina may be compressed between the articular process of one vertebra and the body or pedicle of the other.

"The possibility of the occurrence of pure dislocation of the lumbar vertebrae, which has long been in doubt, because of the close interlocking of the processes and the strength of the ligaments, is proved by two cases collected by Blasious."

Howe.

Howe refers to this subject by saying, "In the cervical and lumbar regions, where motion is not restrained by the vertical articular surfaces, dislocation can occur without absolute necessity of a fracture, but in the dorsal region, where the processes overlap, and are closely locked, *simple dislocation seems impossible.*

"However, there have been reported during the last few years a number of well authenticated dislocations of the vertebrae in different regions of the column. The case of Charles Butcher, who slipped on some steps while carrying a heavy load on his head, in the end, proved that vertebral luxation can occur."

Roberts.

M. Roberts made a report of a carpenter, who, when attempting to raise a heavy scaffolding pole, at a certain point, being unable to sustain it any longer, received its weight upon his back. The accident was immediately followed by complete paralysis below the point injured. Dissection showed that the fifth was separated from the sixth dorsal vertebra. There was no fracture of any process.

It is fitting to close this article by referring to Bradford and Lovet. On page 45 is a cut showing reduction of displaced vertebrae, by Calot. *The patient is lying face downward on a bifid table.* There are nine attendants, four of them have each a limb, stretching the spine. Five surgeons are aproned, *one of whom is operating with his bare hands on the back of the boy*, while the rest are interested observers. This much I have read from the picture.

The worded explanation is: "Forcible correction of the deformity with or without anaesthesia is a method revived in recent times by Chipault, of Paris, although operated first in September, 1893, reducing the deformity, wiring together the spinous processes of the affected vertebrae. He published an account of this method on March 9, 1895. On December 22, 1896, Calot published a paper on the method, in which he said that his first operation dated back only a little over a year. The priority of forcible reduction belongs clearly to Chipault. Wiring the spinous processes of the vertebrae was, however, first advocated before the American Orthopedic Association at Washington, September 24, 1891. The method has been largely advocated and finds a place in modern orthopedic treatment. It has been shown that it is not a proceeding attended with as great risk to life, either near or remote, as would have been supposed."

Palmer.

The P. S. C. has placed this much-disputed question under the light of the mid-day sun. It has developed a well-defined science that has no resemblance whatever to any therapeutical subject. *The subluxated vertebrae are replaced by hand; these unique movements being unlike those used by any other school.*

The Chiropractor adjusts any one or all of the 300 articular joints of the human body, but more especially the 52 of the spinal column. They use the long bones as fulcrums and levers, to replace their subluxated joints. When adjusting vertebrae, the processes are used.

There is a wide difference in the opinions of the above writers on spinal subluxation.

Is it not strange, considering the Bohemian Napravit storm, that there is not a Bohemian book, magazine or literary production which refers to Bohemian spinal adjustment?

The P. S. C. does not, nor ever has claimed that it discovered that vertebrae may be displaced and replaced. To prove this we give the above quotations. They, however, are the first to draw the scientific attention of the public to the difference between a complete luxation, known to the medical world as such, and a subluxation, known to the Chiropractor as a partial displacement of the articular processes.

They were the first to write lengthy articles setting forth that 95 to 100 per cent of diseases were caused by subluxations of vertebrae, *and today no other person has placed such statements in the hands of the public unless copied from those in the possession of The P. S. C.*

This school was the first to assert that any or all vertebrae were liable to be subluxated, before or at birth, in youth and adult age. That vertebrae are often subluxated before birth; and how and why has not yet been given by any other periodical.

The P. S. C. was the first school to adjust, replace vertebrae by the unique method known as Chiropractic, using the spinous and transverse processes as handles, placing this method before the public by circulars and teachings.

It was *The P. S. C.* which, philosophically, first made the statement that the human body was a machine; and run in all its parts by a mind, and that all diseases were abnormal functions, made so by deranged mental impulses.

"B. J." was the first to discover and affirm that the heating of the body is by *mental impulses*, and not by blood.

He was the first to set forth that club-feet and other prenatal deformities, usually named mother's marks, were caused by intra-uterine displacements of the vertebral column, that these may be corrected by adjusting some one or more of the fifty-two joints of the backbone.

The P. S. C., again, was the first school to discover that insanity is caused by subluxated cervical vertebrae, that by adjusting them the patients could be restored to normal condition.

SENSIBLE SUGGESTIONS.

If you should let your watch fall, some part of it becoming displaced, or damaged, so that it does not keep good time or refuses to run, you would take it to a jeweler. Suppose, upon examination, he should tell you that he must take out one or more cogs, or remove a wheel, to make it keep good time; would you leave it with him? Not for one minute. You would say, "I have carried that watch for many years; it has served faithfully, always kept correct time, and you cannot make me believe that the factory put in too many wheels or cogs."

Why not use as good judgment in regard to your mother, wife or daughter, whose value is immeasurably greater than that of the watch? You would not let a jeweler take out any portion of it; but when your mother, wife or daughter has had a fall, or met with some injury, displacing some portion of her anatomy, you at once call in the family physician, whom you have learned to love and respect. He makes a diagnosis and prescribes for her. Day after day he calls, takes the temperature, respiration, feels the pulse, which does not aid in locating the cause of her trouble. He finally advises you to take her to the hospital. There they decide that an operation must be performed; some parts of her person must be removed; they have done all else they know, and they must continue to do something.

You would not trust your watch in the care of one whom your best reason tells you would ruin it by the removal of some of its works, but you will trust one whom you love far more than the watch to the tender mercies of those who rifle them of their motherhood. You listen to the sophistry of the wise doctor; he is willing to take the responsibility, *as far as words go*, and assures you that the operation will put her on the road to recovery. You know that the Creator did not put any useless organs in her any more than the factory did too many wheels in the watch. With dread and fear you finally leave her, although you cannot but think that the responsibility, the gain or loss and the payment of the bill, all rests upon you and not upon the physician.

You cease to use your reason. You take your watch to the jeweler, who removes two cogs, or a wheel, and returns it to you, saying, "I hope it will now be all right." When you took your watch to him it did run, but it did not keep correct time; now, to your chagrin, you find that it will not go at all.

You leave your mother, wife or daughter in the hands of the despoiler. In time she returns home, pale, emaciated and weak. But the surgeon assures you that all she needs is time and rest. You are doomed to disappointment, for you find that time and the doctor's knife has not improved her condition; on the contrary, she is now more helpless than before you spent her vitality and your money.

You tell the jeweler the condition of your watch. He speaks of his years of apprenticeship, of his experience in business; that he can take the works of a watch all out, and did so with yours; he found that it had too many wheels, which made it run too fast, and that probably there are too many in there yet; if you will let him have it once more he will call in some of his neighbors of like craft, who are well skilled in that line. They will examine it with an eye glass to see just what the trouble really is. Thus you are persuaded to again leave your watch.

Your family physician calls on you and tells you that he possibly did not take out the right organ, and advises you to return her to the hospital; they will hold a consultation and ad-

wise with the medical staff which will determine to a certainty just what and how much should be removed. You again yield your better judgment to one in whom you have all confidence, and she is again taken from home and friends.

In the meantime your watch is returned, or rather what was left of it. It no longer looks like the perfect timepiece you once carried with so much pride when everyone admired it and thought it such a beauty. The case is battered and full of wrinkles; it bears no resemblance to its former self; it is ruined beyond all possibility of repair.

Your mother, wife or daughter, as the case may be, is again brought home, or at least what is left of her, but she bears no resemblance to the person you once thought to be the ideal of health and beauty. She is no longer able to walk or take a step; is only a shadow of her former self. Her haggard, careworn look speaks too plainly of her dreadful experience. The physician tells you that the operation was a wonderful success, and then adds, "We have done all we can; give her the best of care while she lasts."

We have drawn upon our imagination to find a man who lacks judgment sufficient to allow a tinker to meddle with and destroy his watch. We have also had to fancy the quack jeweler; for, in fact, we could not find either of these two characters. But there is no need of doing so in the medical profession, for the above is an every-day occurrence. The watch was a fine piece of machinery. How much more so was the woman? If all parts of the watch were in their proper place, all in right position as when it came from the factory, it would keep correct time.

The woman's skeletal frame was all right until perhaps, not mindful of it, some portion of her spinal column became displaced by a wrench. If something is wrong with your watch you take it to a man who can fix it. He adjusts the displaced parts and then it is all right.

Why not repair the human machine and give it the same sensible adjustment you did the watch? It is just as easy to do one as the other when you know how.

But, let us return and examine the runned watch and the remains of the woman. We find the watch corroded and gummed inside; two cogs and a wheel gone and the mainspring broken; no wonder it would not run.

Let us go to the post-mortem of the woman, or what is left of her. A half dozen wise college graduates are present with their knives, saws, etc. They proceed to open the body as they have done before. They know where, for there are the tell-tale scars giving their mute testimony of former operations. They find two ovaries, the uterus and spleen gone, and the balance of the organs so destroyed with poisons which were given her that to examine them and take notes of a clinical lecture offers an instructive lesson to the graduating class. They wonder why she did not live without the parts that were removed.

The remainder of the watch is laid on the shelf as a reminder of your folly and ignorance. What was left of the woman you once loved is buried in the churchyard. The doctors had done all they could; *they gave her the best of medical aid*; physiced, bled, blistered and followed her with the science of medicine; chased her life through all the mysterious windings of art; foreswore Nature, shut the door in her face to keep out the fresh air, blindfolded the windows to exclude the invigorating light, refused her cold water to drink and gave her only dainty foods prepared by the chemist. Such substances irritated her internal organs, to correct which they counter-irritated the external organs. They bled her until she was weak; gave her drugs to make pure blood; kept her alive by stimulants, and let her down by sedatives. *Requiescat in pace!*

TAKE OFF THE BRAKE.

Are you struggling on through life,
With a burden hard to bear?
Are you weary of the strife?
And almost in despair?
Hunt up the *cause* and shake it;
If it does not go, just make it.
Take off the brake.

If your business is depressing,
And your friends all pass you by;
If you have to keep a guessing,
How to keep from being shy,
Hunt up the *cause* and shake it;
If it does not move, just make it.
Take off the brake.

Are you troubled with the symptoms
That the doctors call disease?
Have you taken all the poisons
And still are not at ease?
Hunt up the *cause* and shake it;
If it does not go, just make it.
Take off the brake.

Don't give up the fight and worry,
Take Chiropractic and win.
Be joyful and not sorry,
And a blessing to your kin.
Chiro *finds* the *cause* and shakes it.
If it does not go, just make it.
Take off the brake.

L. H. NUTTING ("Uncle Howard").

The writer saw an incident on Main street, Davenport, Iowa, which caused much ill-humor, amusement and some instruction to the crowd which witnessed it. Human Nature, the quality of which depends upon education, was shown by each one presenting his peculiar idea of the situation and his suggestions.

Main street is paved with brick and is quite steep between Sixth and Eighth. A crowd of idle men had gathered on the street to watch a stalled team. I, of course, joined them. The horses were once full of life and vigor, but now they are thin of flesh, showing want of care and lack of ambition. They are hitched to a *good wagon*, which contained a heavy load. They had gone half way up the hill, but could go no further. The driver did not know what course to pursue. Several of the bystanders were eager to assist him with their counsel. Their varied suggestions only served to confuse him. The reader will notice closely the advice given, for it will be made use of hereafter.

The first instruction was to apply the whip; which was used unsparingly. It *excited* and *aroused* what energy they had left, but only worried them without any gain.

The next order given and acted upon was to back down the hill, so as to give them a *new start*. This was tried, with the result that they were not able to make as far up the grade as before.

A professional-looking man then said, "Blindfold the horses, shake the wagon, throw something heavy on the pavement; *make them believe* that you have unloaded. If they think the wagon is empty, they will pull it up the hill easily. But, try as hard as they might, they could not pull the load.

The next man to offer advice was a clerk from a nearby drug store. He thought the axles and wheels needed *oiling*; that the wheels were tired instead of the horses. A supply of oil was secured and applied to the axles and wheels plentifully, which seemed to make the wagon more inclined to slide down the hill.

Then there appeared in the front of the crowd a seeming wise fellow, who looked as though he was a graduate from some college or a president of some hospital board. He argued the case as follows: "No team on earth can pull that load; there is *too much wagon*, make it as light as possible, take off the spring seat, take out the end-gate and all the loose rods, saw out half the spokes, for they are crowding each other; take off the tires, for they only serve to make extra weight; the fewer pieces you have in the wagon the more easily it will move." But, fortunately, before the well-dressed man's advice was put in action, there appeared a practical farmer who took in the situation at a glance. He spoke in a mild tone, but what he said carried force and was convincing. He said: "Let that wagon remain whole, not one piece of it can be spared at this time when it is so loaded. Wipe off that surplus oil; throw the whip in the

gutter; cease to blindfold the horses." When this was done, he calmly said to the driver, "*Now take off the brake.*" It was released. The team made the top of the hill with the usual speed and ease. The farmer was heard to say, "That is easy to do when you know how." The crowd dispersed, being benefited more or less by the experience.

This may seem to the reader a simple and ridiculous story; but let us see if there are not incidents in our daily life fully as ludicrous and absurd.

Please observe that woman with pale, hollow cheeks and sunken eyes. A few years ago her cheeks were plump and full of color, her eyes sparkled with ambition. She is trying her best to climb the incline of life. She has her burden to carry as the most of women have, but that which used to be comparatively play is now a load she cannot move. She is discouraged and disheartened. Physically and mentally she has not the strength to accomplish her usual labor, and yet she does not realize what is holding her back.

Under all circumstances Human Nature is very much alike. Human sympathy is manifested and advice freely given to the afflicted in much the same way as was manifested in the crowd referred to on Main street. Strangers as well as acquaintances are ready, willing and eager to advise this frail woman what to do. Some recommend stimulants of various kinds to *whip up* the circulation and excite the already overworked woman.

A well-meaning friend advises some kind of physic that will deplete her system, thinking it necessary for her to *get away down* in order to make permanent improvement.

Some advise narcotics to deaden the sensibility of the physical; others suggest therapeutics or Christian Science, for the purpose of making her believe that she has no disease. None of these really assist the invalid, for they *do not release the brake.*

There are those who will advise blistering, or *lubricating* the body with liniments, just to be doing something, for what purpose they know not.

Sooner or later the wise men are called in. With ready hands and sharpened knives they desire to cut out any or all parts that they think can be spared, believing that the less organs that the blood has to support and pass through, the purer it will be.

But, thanks to the sensible farmer (Chiropractor), who realizes that there is a *cause* for all human ailments, and dares to say it in the presence of those standing by, who advise therapeutical remedies, "*Take off the brake.*"

We think it strange that no one in the crowd at the wagon thought of *taking off the brake.* It looks equally strange to a Chiropractor that until twenty-five years ago, no one discovered that a brake is set on some one of the 300 articular joints of the body, compressing the nerves, thereby deranging their functions.

If, by any means, the articular surfaces of any of the joints of the skeletal frame, especially those of the vertebral column, become displaced by being wrenched, go to a Chiropractor, who will *take off the brake*.

The Old School idea of disease is, that it is an enemy that has to be fought, conquered, banished; while Chiropractic kindly says, "*Take off the brake—remove the pressure*—and health is your compensation."

A LINE SHAFT.

Mr. Brown was a wealthy philanthropist. He desired to give employment to his less prosperous neighbors, so he built a large manufacturing plant. The building was large and commodious and made of the best material; the boilers and engines were second to none. The *line shaft* which carried the pulleys for the machinery was perfectly true and laid in solid masonry. The bearings in the axle boxes were of the best adapted material; the machinery was of the latest improved patterns. The plant employed a large number of workmen and produced a special line of goods which were sent to all parts of the world. This plant established a reputation for reliability and first-class work.

Mrs. Brown was his silent partner. Jointly the two had built a large and prosperous business. She was robust, stout and healthy, always did her own housework, and found time to assist Mr. Brown in his business.

At the end of ten years the foreman reported that the *center journal of the line shaft* was *heating*, which necessitated a shut down until it was *adjusted*. The nearest expert was called in, a man who had graduated from one of the best millwright schools. He carefully examined the machinery in the various parts of the building and took the *temperature* and vibrations of the line shaft. He gave the following directions: "Use no solid fuel in your furnace, burn only a little cotton waste and oil; make just enough steam to run the machinery very slowly. In the hot box use the following lubricants and alternate every three hours—tallow, diamond oil, plumbago, and cottonseed oil. Continue this treatment for twenty-one days and it will cool off at the expiration of that time. I will call twice a day and take the *temperature* and *vibrations* of the heated journal and watch for complications.

Bad luck never comes alone. Mrs. Brown was taken sick with fever. Dr. Allo was called in. He, with care, feels the pulse, takes the temperature and asks many questions, from which he determines that she has typhoid fever, and prescribes the following: "Under no circumstances allow her to use any solid food in any form. Her diet must be very light, consisting of liquids such as gum arabic water, a weak solution of sago, or oatmeal gruel. For a change she may be allowed the juice of sweet grapes or oranges, ice water and cold lemonade. At the end of

the second week, if she becomes very weak, she may be given thick gruels flavored with nutmeg, or a tablespoonful of milk and lime water every hour. If she becomes exceedingly low, give her a small quantity of beef tea. I will call two or three times a day, take the temperature, pulse, respiration and see how she gets along, as this is an interesting case."

Mr. Brown returns to the manufacturing plant, finds the men laid off for three weeks, and all orders for goods cancelled. The stagnation of business is more than Mr. Brown can willingly submit to, so he sends for several experts, who arrive and hold a consultation. The journals, gudgeons, pivots, bearings and dead centers are examined. They discuss superincumbent positions, causation, statics, dynamics, energetics, kinetics and the laws of transmission of force and motion, the coefficient of expansion, mechanism, kinematics, elementary and aggregate combinations, acceleration and retardation of vibratory motion and composition of deviations. The book-wise experts differ on every phase of the trouble except the one on time. On that they all agree; that there will be no change in the heating of the journal in less than twenty-one days, and in two or three weeks more, if all goes well, the plant may resume work. This being the unanimous decision, the question then arose as to what were the best lubricants for the affected journal. A score or more of different kinds were suggested, which brought on a discussion as to vegetable and animal oils, some asserting that those of the animal were too viscous, others that the vegetable was too thin.

While this meeting of the learned scientists was being held, Mr. Brown was looking after his wife's welfare. He was not fully satisfied with the prognosis of Dr. Allo. He could not think of his wife lying in bed burning with fever for twenty-one days, and then, if alive, would need a few weeks to recuperate. So he called in, one by one, Dr. Homeo, Dr. Electric, Dr. Hydro, and Dr. Herbal. While they differed very much as to which was the best method of treatment, they did not agree in etiology, pathology, diagnosis and prognosis, viz.: that the cause of the typhoid fever was a microscopic vegetable organism which got into the body much in the same way as the bug got into the boy's watch—between the ticks; that there would be a change in twenty-one days, they hoped for the better, and Mrs. Brown would be around again in two or three months. Mr. Brown looked serious and demurred at the probability of his wife being compelled to lie in bed for so long a time. To have the plant shut down a month was a financial loss, but to have his wife wasting away with fever, existing between life and death, nearly distracted him.

Almost delirious, he goes over to the plant and finds the meeting of the expert scientists in an uproar. The foreman has heard of a master mechanic who could adjust and fix the machinery. He had arrived and *made an examination* of the *line shaft*, and found that the boxing had slipped a little to one side, causing it to bind, creating friction and heat; that all it needed

was adjusting. He said he could fix it, have it cooled off, and the men all at work in a few hours. The proprietor and the experts were surprised to hear such a statement from a man who had never taken a college course in physics, but he had a knowledge so systematized that he could predict and verify by measurement and observation a clear perception of facts as they were. The book experts all agreed that such conditions always did and always would take twenty-one days before a change would be observed; that it was one of the immutable laws. While no two thought alike as to which mode of treatment was best, they were all agreed as to the time limit. The proprietor, being nervous and anxious about his wife, told the mechanic to go ahead and *fix it*, ordered the foreman to notify the men to report the next morning, and the fireman to have steam up. The mechanic adjusted the box in a few minutes and presented his bill, which was promptly paid.

Mr. Brown returned to his residence in deep thought. He had often heard of a hand-fixer named Chiropractor, who had quick results. Why not call him? Possibly he might find the cause of Mrs. Brown's illness and *fix it* as readily as the mechanic did *the line shaft* over at the plant. Dr. Chiro was called and made an analysis of Mrs. Brown's *spine* and found a *subluxated vertebra*, a displacement of the articular surfaces which had in part lost their proper connection. This made a local excessive heat and caused all the symptoms which the other doctors called typhoid fever. It took Dr. Chiro but a minute to fix it. As he said, "To know how to do a thing is to be able to do it." Mr. Brown was so well pleased with Dr. Chiro's analysis of Mrs. Brown's case that he invited him to be seated in his cosy sitting room, where they chatted for half an hour. Mrs. Brown's fever had gone down, and supper was ready, so the doctor was invited to take tea. Mrs. Brown arose, dressed and seated at the table, ate her accustomed meal. It is needless to say that Mr. Brown again wore his usual smile. The plant and his wife would only lose one day each by *the mechanical displacements*, which were corrected by *intelligent mechanics who understood their business*.

We have drawn on our imagination for the misdoings at the plant, but such short-sightedness of the medical men is of daily occurrence. Chiropractors are fixing typhoid fever and other acute diseases in one or two brief adjustments. All M. D.'s fevers are their measurements of increased heat and over-supply of caloric furnished by the calorific nerves, the heat function performed in excess because of impingement of nerves. These displacements are replaced by hand adjustments. Chiropractic opens a field of vast possibilities for the future welfare of mankind. By many students it is considered to be the greatest discovery of the present century. To do such is easy when you know how and have the practice.

Self-limited diseases are those in which doctors are unable to lessen the accustomed number of days they usually run. Why

cannot they abbreviate the usual course? All medical schools teach that certain diseases limit themselves; that no known treatment will abbreviate nor materially change their course; that certain symptoms will arise under treatments which are entirely opposite. In other words, the self-limited diseases have their allotted number of days to run under any kind of therapeutical remedies, because not one of those schools with their treatment know how to remove the cause; not one of them knows the reason for acute self-limited diseases. The causes are not external; they are in the patient; are caused by something wrong—a screw loose somewhere. Something is wrong or this human machine would run smoothly, without friction or heat. There are certain portions of the body inflamed because the nerves of that part are impinged by the injury. Where is the pressure that causes nerves to produce diseased condition? We answer that question: locate the injury, find the wrong and adjust it. "The self-limited diseases" are limited, cut short, because the displaced vertebra has been replaced. Pneumonia, typhoid, smallpox, or any other acute disease can be returned to normal function by adjusting the cause.

Subluxated vertebræ pinch the nerves; impinged nerves represent the cause of disease.

CHIROPRACTIC VERSUS THERAPEUTICS.

It is unlike all known methods of therapeutics, so much so that it is not a therapeutical agency. Osteopathy is the only system which has any similarity. One of *The P. S. C.* students (an Osteopath for six years), said: "The methods of Chiropractic and Osteopathy differ in application and results, as well as in name. There is no resemblance in the treatment, and but little in any way except the philosophy. The application of the two is so different that learning either one gives no clue to the other."

In 1874 Dr. Still stated his observations as follows: "A disturbed artery marks the period to an hour, and minute, when disease begins to sow its seeds of destruction in the human body. That in no case could it be done without a broken or suspended current of arterial blood, which by nature is intended to supply and nourish all nerves, ligaments, muscles, skin, bones, and the artery itself. The rule of the artery must be absolute, universal and unobstructed, or disease will be the result. All nerves depend wholly upon the arterial system for their qualities, such as sensation, nutrition and motion, even though by the law of reciprocity they furnish force, nutrition and sensation to the artery itself."

Journal of Osteopathy, May, 1904, page 196, says:

"How Osteopathy Treats the Blood."

"It is well known that pure blood is an absolute essential for health. The blood is the medium whereby all organs and parts of the body are supplied with nourishments for repair and growth.

"There are five ways, at least, how the blood is influenced and treated by Osteopathy.

"The general Osteopathic treatment is something more than a modified combination of massage and Swedish movements. Simply something more by virtue of additional manual spinal column stretching and rib separating."

"From this we will see that Osteopathy is a combination of massage, Swedish movements, "spinal column stretching and rib separating."

"Osteopathy also offers much along the line of treatment rendering and keeping the blood germicidal."

Osteopathic Health says, page 315: "Altered blood flow means disease, *the body is such a machine*. It becomes as clear as daylight, then, why the Osteopathist finds that *most diseases are associated at basis with an abnormal blood flow*."

The P. S. C. teaches that: "Whenever a nerve is injured or interfered with in any way, at that minute its function becomes abnormal, and sooner or later, with more or less effect, it makes conditions of abnormal functions in that portion of the body where those nerves end. Mental impulses control all actions of not only the ligaments, muscles, skin, mucous membrane and bones, but also the blood itself, for the arteries and veins are supplied with nerves which convey mental impulses that regulate the amount of blood sent to any part by contracting and relaxing the vascular tissue. Because nerves convey this control, all normal sensations, nutrition and motion depend upon mental impulses instead of blood. Hence, it necessarily follows that the human body is *not* a blood machine, as has been taught by all schools of medicine, including the Osteopaths, but a nerve machine run throughout all its parts by mental impulses."

The Pacific School of Osteopathy says: "The legal definition of Osteopathy is a system, method or science of treating human diseases." *Chiropractors do not treat diseases*, they adjust the wrong which *creates* disease; they have discovered the simple fact that the human body is a sensitive piece of machinery, run throughout all its parts by mental impulse. That disease is a condition in which Innate Intelligence is trying to carry on its work of growth and repair with the human machine out of order.

OSTEOPATHY AS DEFINED BY DR. A. T. STILL.

Journal of Osteopathy, Kirksville, Mo.: "Dr. Still reasoned that a natural flow of blood is health, and disease is the effect of local or general disturbance of blood; that to excite the nerves causes muscles to contract and compress venous flow of blood to the heart; and the bones could be used as levers to relieve pressure of nerves, veins and arteries."

OSTEOPATHY AS DEFINED BY DR. A. P. DAVIS.

Osteopathy Illustrated, page 11.: "Diseases are recognized as only the result of the interruption of the onward flow of the

fluids of the body, in their various rounds to build up and tear down the various tissues in itself, and that when these tissues are normally built up and the waste material properly eliminated, health is the inevitable result."

CHIROPRACTIC AS DEFINED BY THE P. S. C.

Historical—The first accidental crude Chiropractic adjustment of a vertebra was given in September, 1895, by Dr. D. D. Palmer. Neither the art nor the science was formed at this time. Its growth remained practically dormant till 1903, since which time his son, B. J. Palmer, D. C., Ph.C., has developed it into a well defined non-therapeutical philosophy, science and art that has no resemblance whatever to any therapeutical method. Health (equality) is restored by completing the mental and physical circuit; restoring the currents of cycles of mental impulses acting through the material agency; to replace the full quota of positive with an equivalent negative; permitting the reconveyance of the intelligent immateriality into the mechanical corporeal; to reconstruct the normal psycho-physical unit; to make as one the trinity of creation, transmission and expression; to re-establish equilibrium between the abstract and concrete, all of which is induced by replacing specific disordered concrete mechanical anatomy which permits adjustment between that one law of two principles—cause and effect—the rules and manner of declaration of which are unique and unlike any theories of stimulative or inhibitive movements or applications used by any other school.

Defined—Chiropractic is a name given to the study and application of a universal philosophy of biology, theology, theosophy. health, disease, death, the science of the cause of disease and art of permitting the restoration of the triune relationships between all attributes necessary to normal composite forms, to harmonious quantities and qualities by placing in juxtaposition the abnormal concrete positions of definite mechanical portions with each other, by hand, thus correcting all subluxations of the three hundred articulations of the human skeletal frame, more especially those of the spinal column, for the purpose of permitting the recreation of all normal cyclic currents through nerves that were formerly not permitted to be transmitted, through impingement, but have now assumed their normal size and capacity for conduction as they emanate through intervertebral foramina—the expressions of which were formerly excessive or partially lacking—named disease.

All movements, whether normal or abnormal of, or in the body (including blood circulation), are but the personification of mental equivalents—mental functions guided by Innate Intelligence, creating physical expression. All ache or pain is but the intellectual interpretation placed upon impressions received from the periphery concerning the abnormal physical conditions.

Every act and thought is controlled by Innate Intelligence through the medium of the brains and their prolongations—

nerves—to tissue. *It is the life of the body when transformed by the brain.*

We are well when Innate Intelligence has unhindered freedom to act through the physical brain, nerves and tissues.

Disease is lack of normal functions.

Innate mental impulses control the vital functions of assimilation, circulation and respiration, asleep or awake. Dreams are sensations interpreted by the same discriminating force.

Diseases are caused by a *lack of current of innate mental impulses*. This is produced by a constricting force placed around nerves through accident—vertebral subluxations. These displacements are *caused* by a concussion of forces, the external meeting the resistance of the internal, induced by traumatism.

The above is given for those who think there is no difference between Chiropractic and Osteopathy. It will be readily seen that Osteopathy, like Allopathy, is founded on the delusion, “the blood is the life.”

Chiropractors state that mental impulses are the manifestations of *life* of the body, that it is controlled in every act and thought by innate and educated minds, that the body is heated by calorific mental impulses, whether the heat is furnished in normal quantity as in health, or abnormal amounts, as in so-called fevers, which is but excessive heat in those parts of the whole of the body.

A Chiropractor is a hand practitioner; he adjusts displaced parts, he repairs a disordered human machine, he puts in order and sets to right the displaced bones of the skeletal frame which are not in their proper position. He does this by hand, and that is exactly what Chiropractic means—hand fixing.

A Chiropractor does not operate on, manipulate or treat a watch, sewing machine or the human machine for any wrong doing. He adjusts, repairs, fixes with his hands the displaced parts of the machine, whether human or inanimate. The jeweler would think you daft if you were to request him to treat your watch. He would ask you if you did not want it *adjusted, repaired, fixed*.

Machinists do not operate, manipulate or treat when they *adjust* a pinion, wheel, axle or other part of a machine; neither does a Chiropractor treat, manipulate or operate when he replaces a subluxated joint or vertebra.

All therapeutic methods, including Osteopathy, treat effects, symptoms, ailments, nervousness, lack of ease; these are but the results of an altered human mechanism, derangement of the human machine, producing uneasiness, pain and distress, causing a disturbance of the normal performance of the vital functions.

Chiropractors find that all illness, sickness, affections, indisposition, complaint, maladies or lack of innervation, the results or consequences of disorder, derangement or some part of the human frame.

Osteopaths manipulate, operate and treat. The June number of *Journal of Osteopathy*, 1905, page 202, says: "Osteopathic manipulation for the relaxation of tissues, the stimulation of nerves and nerve centers and the liberations of blood current." Chiropractors never relax or stimulate nerves by manipulation. Do not write or talk about liberating obstructed blood currents. Osteopathic literature does not read like hand fixing, like adjusting displaced parts to their proper relation to other parts.

The Osteopath, by rubbing, kneading, pressing and a general overhauling, by neck twisting, arm and leg wringing, aims to inhibit or stimulate nerves, whip up circulation, slow up or stimulate the action of the heart, and other organs. The M. D.'s try to produce precisely the same effect by drugs. Chiropractors never deaden, inhibit or stimulate nerves, or the vital organs of the body; they free nerves from impingement, so that their impulses may be normal.

We do not prescribe or use medicines to *treat* disease or symptoms; the M. D.'s do. *We do not use anything* that a medical man employs or make any movements an Osteopath does.

We do not manipulate; the masseur, magnetic and the Osteopath do. We repair the human machine by *adjusting*. When we adjust or fix a machine, whether human or inanimate, we do not treat it, we do not operate upon or manipulate it.

All therapeutic methods, including Osteopathy, treat effects. Chiropractors do not treat effects, disease, people, nor anything else. They fix, adjust, repair, put to rights, replace, restore to normal conditions.

Effects can only be treated. Causes cannot be treated. They must be made right by replacing the subluxated bones where they belong. All other schools claim to and do treat effects—diseased conditions; we fix, adjust the cause of those conditions, *e. g.*, a person has a headache—all others would treat the headache, Chiropractors find a subluxated cervical vertebra pressing on the nerves, causing the ache. By adjusting, we remove the pressure on nerves and the ache ceases. Symptoms are treated by all therapists, but not by Chiropractors. Causes are never treated. They are, or at least should be, properly adjusted. You might treat a boy or a watch to a bath for cleanliness; or a dose of medicine, or a dish of ice cream for an effect; but you would not treat a subluxated hip or vertebra, that should have its cause adjusted.

If I am called to your house and find you in trouble because water is dripping on your furniture, books and carpets, even into the cellar, rotting fruit and vegetables, what shall I do to help you? Shall I set a vessel and daily catch the water to see how long it takes to fill a certain measure? Shall I count the drops to see how many there are in a minute? Shall I make a chemical or microscopical analysis of the water for the purpose of showing that I am a thoroughly equipped practitioner? Will it not

be of more value if, without preliminaries, I fix the leak in the roof, which is the cause of all the trouble?

During the last twenty-five years many changes have been made in the methods of treating diseases, but the innovation, made by Chiropractors, has been more radical than all the rest combined. They have made an entire transition. Instead of treating disease they adjust cause.

Inaction or painful sensations of stomach, liver, kidneys and other organs are caused by nerves of innervation being pinched at their exit from the spinal column. Freeing these nerves allows mental impulse to act and innervate the vital parts; improve digestion, assimilation and circulation; give strength, vigor and tone to the mental and physical, thus making men and women better prepared to perform their business avocations.

Why not find that which is wrong and make it right, instead of leaving the injured part untouched? Why not get a move on you and learn to do more than count the pulse to see how many more beats there are this side of eternity? You will never find what is creating disease by taking the temperature, respiration and the pulse, or by "chemical and microscopical analysis of the secretions and excretions," or by palpation, percussion and auscultation. These only tell the amount of morbid conditions which are the effects from a cause. They only aid physicians to name those conditions. Why not find the cause and adjust it for a definite purpose, thereby correcting the displacements?

Chiropractic workshops are not operating, manipulating or treating rooms. We do not operate, manipulate or treat. Put in order the displaced parts, reduce or bring portions of the human machine to a true relative position. A mechanic has appropriately called our adjusting rooms "repair shops," and this is exactly what they are.

The Chiropractor adjusts the human nerve machine with an ease never acquired by any other system. M. D.'s give names to diseased conditions, according to combinations of symptoms. The derangement of the human mechanism is the cause of any part of the body being affected with not ease. Let M. D.'s and others continue to treat symptoms, play tag, chase them from one part of the body to another, until they learn to fix in proper position those which have slipped out of place.

The Osteopath treats bones, joints, muscles and nerves. Chiropractors adjust displaced parts, thus returning them to their normal position.

The words "operate," "manipulate" and "treat" are Allopathic, or more correctly speaking, are old school signboards. For a Chiropractor to use them would be to mislead and deceive the public, our patients and ourselves. They do not express the Chiropractic sentiments.

Chiropractic, rightly understood and practiced, does not need assistance from any of the methods which treat, manipulate or operate.

The following is copied from Dr. Still's book on Osteopathy, page 130.

"Rheumatism. Before it begins at the joints, you are sure to find that all gas has left the joints. Thus, electricity burns because of bone friction. Some gas must be between the bone joints. Thus we find great use for atmospheric pressure to hold bones far enough apart to let the joint water pass freely over the opposing ends of bones. There is a natural demand for gas in all healthy joints of the body. Reason leads us to believe that gas is constantly being conveyed to or generated in all joints. Before rheumatism appears the separating gas has been exhausted and there follows friction and electric heat because of there being two or more joints in one electric circuit or division.

"We thus get what we call neuralgia, rheumatism, sciatica and so on to the full list of aches and pains not accounted for to date by our philosophers.

"On this plane of reason many rich harvests await the sickle of reason. On this plane you can see and know the whys of consumption, dropsy, tumors, fits, gray hair, baldness, and so on to a surprising number of diseases."

The reader will see that there is no resemblance between the above and Chiropractic. We find the tangible cause for all ailments in the disordered mechanism of the vertebral column. Chiropractic is the only method that exactly locates the cause of disease and removes it by hand adjustment.

To illustrate more fully the difference between Medical and Osteopathic treatment, and that of Chiropractic adjustment, we will briefly describe them:

The medical doctors use hygienic measures to prevent the spread of diphtheria and vigorous treatment of swabbing the throat with disinfectant solutions for the purpose of destroying bacilli. General or specific medication is used to counteract effects of poison created by decay of the bacteria, the complications and sequelæ that is sure to follow.

The Allopath and Osteopath agree on etiology and diagnosis, and differ only in the latter trying to do with his hands what the former aims to do with drugs. They look upon diphtheria as an enemy that has to be "combated" with the most formidable guns and ammunition in their armamentarium.

The Osteopathic treatment for diphtheria consists of more than 200 different movements of "general and special treatment," such as pulling, stretching, rotating, raising clavicles and muscles, in fact, a general overhauling of one and one-half hours. The object is to prevent stagnation, equalize the circulation of the fluids.

The reader will observe that the above schools treat the effects which are known as diphtheria. They agree as to bacilli being the cause. Chiropractors find that bacilli are there as result as much as mold found on decaying cheese.

Chiropractors understand that necrosed membrane is the result of excessive heat, commonly named inflammation; that diphtheria is caused by those nerves which end in the membrane of the throat being pressed upon in a right dorsal foramen, which is occluded because of deleterious substances acting upon sensory nerves, which in cyclic turn affect the motor. Abnormal sensations induce abnormal actions. Abnormal sensations act on adjacent vertebræ, displacing them, impinging nerves, which express their injury by an inflamed condition of their terminal endings.

The Chiropractor replaces the displaced vertebræ by one move, which is distinctly Chiropractic. Excessive heat is reduced; the symptoms known as diphtheria cease. Wherein does Chiropractic resemble Allopathy or Osteopathy?

INNATE INTELLIGENCE.

Each individual has two distinct and separate minds, the Innate and the Educated, both the expression of Innate Intelligence. These thinking forces existing in the same body are closely associated and while Innate influences the Educated, the conditions are not vice versa.

The intelligence of the Educated mind is wholly acquired—learned by experience. The Innate is not acquired. It is born within and with us, and it is as capable of running all functions of the body at birth as in adult life. It is not obtained by experience, but is inherent and does not depend upon years of observation.

Some have but little of the Educated, but the Innate performs all the functions of the body in a manner which the inventors and philosophers would be glad to enjoy.

Nature, instinct, subconscious mind and intuition are terms often used to carry this idea of intelligence, but they do not express the sentiment fully.

The mother, whether human or of the lower order of animals, transmits the Innate to her offspring, but it takes a lifetime to educate the voluntary mind.

All organized living beings endowed with the interpretation of the senses, and the innervation, assimilation, circulation, nutrition, calorification, reparation, excretion, secretion, and respiration, are under the control of and managed by Innate, except in cases where Innate nerves are affected by being pinched and pressed upon, causing abnormal functions. Such need mechanical adjustment, not chemical changes made by drugs.

Innate comprehends that birth is a transition from mother dependence to self-existence; that they (he or she) no longer depend upon her for the performance of vital functions; they must breathe, take nourishment, digest and assimilate it and

pass the refuse out of the body. These various functions are performed as naturally with as much intelligence on the first day of its existence as in after years.

Often Innate and the Educated differ in their opinions of the same subject, e. g., in normal condition the bowel actions are under the control of Innate, but because of subluxated vertebræ the nerves of bowel innervation are inactive, being pressed upon in the intervertebral foramina, consequently there is lack of action, usually named constipation. Innate would like to have Educated relieve that pressure and restore innervation, but because his senses are warped by years of training, he proceeds to give a physic, compelling Innate to collect water and wash the intruder out by the way of the bowels. Innate finds an undesirable drug forced down the throat and into the stomach much against his sense of right and proceeds to get rid of an objectionable dose. The poison does not act upon the stomach and bowels, but Innate acts on it.

Innate intelligence never sleeps. It runs all the vital functions of our bodies night and day, by and through nerves. If these were free to act in a natural manner, we would not know an ache, pain or any of the symptoms of disease. The life-power and force would not be obstructed and normal.

Innate is the body builder before as well as after birth. The Educated directs the thoughts that are above and outside of the material body.

The prospective mother, seeing abnormal sights, transmits thoughts, involuntarily, of the spectacle to the Innate builder, which constructs a portion of the unborn just as the mother has strongly impressed it to do. This is commonly known as *nævus*, marking the child, material imagination of the foetus in utero.

Heretofore it has been supposed that the mother transmits her thoughts directly to the unborn, but the facts are that the Educated may receive impressions which, when interpreted by Innate, may be directed to form the child not only in its physical makeup, but also in its sensational likes or dislikes. Impressions may be received through the Educated or Innate brain and interpreted by Innate Intelligence, which will influence the development of the child.

If the mother is acquainted with this law, she will exclude all directions that are not to her liking, and direct aright the future physical and mental inclinations of her offspring.

Remember that these two separate and distinct intellects, whether sane or insane, good or evil, stamp their thoughts more or less upon each other. We can see and study much of the work of Innate Intelligence by an examination of the osteological specimens at *The P. S. C.*

Space will permit only a brief description of a few specimens in order to understand the management of *osteology* by Innate.

To an observer this department is truly wonderful. A calvarium (top of a skull) shows on both sides of the inner surfaces beautiful pictures of forest fires, as perfect as though drawn by an artist, the fire and smoke being of natural color, the production of Innate's intellect, by building vimineous arborescent exostoses.

This unique monstrosity is an extraordinary piece of work. To be fully appreciated it must be seen and explained.

On page 134 is a cut of the fourth and fifth ribs of the right side. These have eight healed fractures. The fourth shows two, the fifth a comminuted fracture at salient angle. Innate repaired these fractures, doing good work with all of them excepting the one shown in the center of the fifth rib. These fragments were not in the proper position. Not being a mechanic, it could not adjust the displaced pieces; Educated should have done that; nevertheless, it did the best it could with the conditions imposed upon it. It filled in the vacant space with interposed callus, but the pieces not being in right position, the osteoanaplerosis was not perfect. The symphysis was weak and liable to break. To strengthen this weak place it built a pier (exostosis) from each rib toward and touching the other. These surfaces were covered with hyaline cartilage, making a very nice movable brace similar to that which a carpenter would build to strengthen a weak place in a joist, except that it did not make a stiffness of the two ribs by ankylosing, yet it had all the benefits of a brace. The educated man knew nothing of this brace built between the ribs by this repairer. It showed intelligent architectural reasoning, using judgment and skill in adopting means to accomplish the purpose intended.

We have an atlas and axis, the first two vertebræ next to the head, which show Innate intelligence and ability in coping with existing difficulties. By an accident the anterior of the atlas was displaced upward, causing it to make a facet on the odontoid for articulation. This fact was so near the top of the processus dentatus that there was great liability of this atlas slipping up over it and backward against the spinal cord, which would cause instant death. In this it shows reason, judgment and skill in elongating the process to prevent such fatality; and yet the Educated man knew nothing of this internal work. A Chiropractor would have replaced the atlas to its normal position.

The P. S. C. has over one thousand specimens of fractures which show repairs by Innate under favorable and unfavorable apposition. If some of these could talk they would tell of bungling work done by the M. D.'s, who manipulated them before Innate got a chance to do its work.

It is interesting to a pathologist to note the various changes in the shape of the different parts of the vertebræ resulting from its adaptation to some displacement which Innate was not able to adjust, and the physician did not know how. This intelligence displays much and varied intellect in the many locks found in



the vertebral column to prevent the further displacement of an already subluxated vertebra, one of which is as nice a dovetail as any artificer could make. Very many times we find the vertebræ ankylosed by osseous symphysis for the purpose of preventing any further displacement. Innate is not an external corrector, therefore, it cannot replace them. These osseous unions are removed by it after Chiropractors replace the subluxated vertebræ to their former natural position.

In four rachitic specimens of tibia and fibula, which have been bent while softened by excessive heat (the M. D.'s fever), causing bow legs, we find a corresponding flattening (platynemia) of the fibula to compensate and strengthen its fragile mate. In femora which have been weakened and curved by incomplete fractures, we find the linea aspera built out in a pier to compensate for weakness.

To say that this intelligence displayed by Innate is nothing but nature, instinct, or intuitive force, does not meet our comprehension.

The immense variety of monstrosities which are created or built by this intelligence opens a boundless field for observation and research.

Different kinds of work in various parts of the human body are performed by mental impulses that have various functions. Occasionally when long bones are fractured the fragments do not unite, the callous material is not supplied. The M. D.'s try various expedients to unite, but they experiment in vain, for they do not know why the osseous mater (symphysis material) is not supplied. Chiropractors who have studied morbid functions of nerves would know why the necessary material for uniting these fractures was not supplied and would be able to assist these useless repair nerves to their normal function and usefulness.

These conditions, referred to as showing intelligence, do not include deformities, abnormal growths, and exostoses caused by overheat and excessive nutrient supply by deranged functions. A part of all of the skeletal frame may be softened by superheat (the M. D.'s fever), a portion of the bone may ooze out and be deposited on the surface, causing morbid enlargement and ankyloses. When the heat becomes less than normal, we find the third stage, that of hardening, consolidations and eburnation; functions performed in excessive or insufficient amount.

Some diseases are the morbid condition of Innate mental impulse, while others are of the abnormal sensibility of the Educated, the distinction being known by perceiving whether the abnormal conditions that exist are produced when asleep or awake adaptatively or pathologically.

Hypnotists put the Educated in a condition of sleep and draw from Innate by suggestions. All cures made by Faith, Christian Science, Metaphysics, Charms, Mental Healers, Magnetics or Suggestions are produced by the Innate controlling the Educated physical. Many persons in whom the Innate is prerogative assert themselves in thought over and above the Educated, compelling the Educated Mental to believe the possessor is ailing. It is a poor rule that won't work both ways.

If you would comprehend diseased conditions of the vital organs, study the Innate functions. The old blood delusion of diseases, or the present fad of microbes, bacteria, and bugs, does not explain intelligently the unpleasant sensations.

Innate intelligence knows much more of the normal actions and morbid conditions of the stomach, liver, kidneys, pancreas, spleen or appendix than the medical world.

If all parts of the human machine are adjusted to their normal position, then Innate can use them in a natural manner to perform all the various functions of the different organs; but the M. D.'s present fad is to remove any diseased organ that the

afflicted can do without. Too often the patient's friends find, when too late, the fatal mistake.

Dreams are thoughts of Innate mind afterwards remembered by the developed mind, varying more or less, owing to the vivid impressions made upon them.

Innate does not study but one of the two forces necessary to induce a subluxation; does not set displaced or fractured bones, but after a Chiropractor replaces them it will absorb and remove useless exostoses or other temporary protections which are no longer needed, and puts to natural use those functions which before were useless or deranged.

THE NERVOUS SYSTEM.

CHIROPRACTICALLY CONSIDERED.

At birth two mentalities have the present and future control of the body. Involuntary and Voluntary, or Innate and Educated minds. The latter is under control of the will; the former is not. Each has a separate brain.

In considering functions as Involuntary we mean not under the control of voluntary man. They are involuntary to him, yet voluntary to Innate.

Each brain has a separate set of nerves. We have five or more senses of the physical, corresponding to as many of the spiritual or Innate. The actions of these are voluntary functions to each mind. Whether they are for our benefit or detriment, depends upon the Educated mind.

Through an accident the hand touches a hot stove. The "involuntary" mind, through sensory nerves, received the impression and an involuntary motor mental impulse is to jerk the hand from the offender. This is done in less time than we are aware of it intellectually, before we have time, voluntarily, to think or reason about it.

The movement of the bowels is involuntary. An impingement of the "involuntary" motor nerves paralyzes its functions and Innate has not power to act. A lack of involuntary action calls voluntary sensory's attention, and the result is, voluntary motor assists the movement. You are not aware of this condition previous to Innate asking for help.

Sympathetic nervous system, in name and functions, expresses no intelligence to a Chiropractor. To say that the stomach works in sympathy with other organs shows ignorance. It would prove that there is no direct source from which each organ received its mental energy. Physicians understand that functions are executed, but how and why has always been a mystery. Do they not know that all through the body are millions of nerve fibres receiving mental impulses which control all functions; that each fibril has direct connection with a specific lobe within its

brain, does not have relay stations in the spinal column; that it receives orders from one or the other mind and proceeds to carry those impulses along the best path in the quickest manner and will do so if not interfered with? Then he will have some intelligence of how harmony exists equally in all organs at the same time, providing there are no mechanical obstructions.

Brains are of different substances, proportion of impressions that are carried to them make different sensations and different responsive motor acts follow, thus manifesting individual idiosyncrasies.

I understand the importance placed upon "reflex action" through "relay stations" in the spinal cord. "Reflex" means an action without any apparent cause, as such is backed by intelligent deductions. Sensory nerves carry external stimuli to either the Innate or Educated brains, the impression being according to the quantity of that impulse. "Reflex action" does not show any result of thought. I would rather know that a function was performed as a result of an educational impulse, than to think it was the result of a "sympathetic reflex action." The nervous system may be compared to a tree. The acorn contains all the future elements of the oak. In that nut is the miniature tree which, when grown, has as many fibrils above the ground as below. Could you take the smallest one at the topmost branch, trace it downward through the trunk, it would end in the ground. Dissection would prove this with every fibrilla. Chiropractic has demonstrated the same principle with the two nervous systems. Nature and Innate use the same instructive intelligence, varying only in degree.

The infant at birth contains all the functions of the adult. Innate is as capable of running that body then as in after years. Time is needed for the intellectual mind to develop. Every nerve fiber, in child or adult, would be traceable if it could be dissected through tissue, fascia, around ligaments and the bones to the spinal column entering through the intervertebral foramina and into the spinal cord proceeding to its functional center in the brain. Thus all fibers continue their identity from the periphery to its epiphery or beginning.

The nervous system may be compared to a multiple telephone switchboard. In this each nerve has its specific location according to function. Caloric for the whole body is furnished from a specific lobe; involuntary muscular action from another, etc. From each lobe of the brain issues a small cable composed of multiple fibers, which contain all the nerves of that function for the entire body. There is no division until it leaves the magnum foramen, then the process of division and subdivision goes on until every tissue of the body needing that function has been supplied. The spinal cord at its exit from the skull contains all the nerve fibrils of the various functions.

The trunk of a tree and the spinal cord are similar, spinal nerves, are as branches. From this they subdivide to all tissues,

conveying mental impulses which control all of the functions of the body. The feeder for the tree is ground; for body, the brain. Thus we prove the falsity of the spinal relay system. Its existence would be superfluous, contrary to an established rule of Innate.

Nature's principles are absolutely correct, to interpret them is simple, if on the right track; if not, research for years does not demonstrate a single fact to the contrary.

Some authors speak of three divisions of sensory and motor nerves; voluntary, involuntary and semi-voluntary. The first two mentioned are frequently together. Occasionally we find an involuntary organ having voluntary nerve fibers ending in it, giving voluntary use of an involuntary organ, thus explaining the last mentioned. A notable example of this development can be found in the Egyptian Muscle Dancers, who have absolute voluntary control of involuntary muscles and flex them at will.

There are sets not in daily use, which are called for in case of necessity, like the fire department of a city. They are building and property savers. The reparatory nervous system has the same function to perform in the body. Called into play when abnormal, diseased or fractured parts need attention.

A healthy body never calls this set into play. In this age a perfectly healthy system can not be found, any more than a city without fires. These reparatory impulses are under the control of Innate. Fracture the femur, the Innate intelligence cannot replace the splinters; therefore, it heals as it is, whether set or unset, and it is this function that is then brought into action. In indigestion, tissues are depleted from lack of nutrition, muscular walls are paralyzed, not allowing peristaltic movement caused by impingement of those nerves as they emanate through intervertebral foramina on their way to the stomach. A Chiropractor adjusts the subluxation and immediately reparatory impulses are at work rebuilding. Previous to adjustment the reparatory process was endeavoring to right matters, but impingement of those nerves acted as a check. Adjustment released pressures and restored normal functions.

Innate develops during our lifetime just so much as the voluntary nervous system places us in contact where she voluntarily senses the pleasures of that with which she sees or feels, etc. When we see, hear, smell, or feel, it is functionated through two minds. Both sensory (the Educated and Innate) are sensing the same thing at the same time. If pleasant, Innate relaxes, becomes receptive; if injurious, she rebels and forces it out. This acting depends some upon how our parents developed their Innate voluntarily, and how we are developing our Innates now will be noticeable in our children.

This Innate sensory and motor nervous system never sleeps, will sense danger when our Educated system is asleep, and act upon it, thus showing, not reflex action, but Intelligence, deep

thought, upon the part of a superior control. You are now beginning to see the difference between two minds and their expressions through two independent nervous systems. They are distinctly separated in functions, action, depth of observation and thinking powers.

Each mind has a memory. You can voluntarily remember that which happened yesterday or many years ago. The hypnotist puts to sleep the Educated nervous system and through involuntary sensory calls certain things to be brought forth, thus drawing from Innate's memory what long ago was forgotten by the Educated. The involuntary motor responds to the sensory commands received.

Educated and Innate nerves do not, nor can they, communicate within the cranium. They have a constant communication through peripheral endings of both sets. Sensory or motor, for either set intercommunicating that which is pleasant and worthy to take up, or acting upon that which is detrimental and should be forced outward, both working in perfect harmony (not "sympathy") unless, as occasion happens, our Educated thinks itself capable of dictating to Innate what and how they ought to do.

As a protective measure against the spinal subluxations, Innate, in building and developing the child, prenatally and postnatally, does not allow all functional nerves going to a given point to emit through the same foramen; thus, sensory of one and motor of the other exist above a certain vertebra and vice versa; then an existing subluxation would only make abnormal the functions of nerves emanating through that foramen.

The depth of thought or ability of the Voluntary or Educated mind is significant compared to the continued added knowledge of each life to the Innate; therefore, she knows and is more capable of running this body, through nerves and their functions. This combined knowledge of many generations senses, through Innate sensory nerve fibrils, a poison more quickly and better than the Educated sensory fibrils and will act upon it long before our voluntary sensory nerves are aware that that which was given voluntarily, to the body, was a damage.

We frequently take poisons into the stomach in the form of solids or liquids, into the lungs as gases, or have injected vaccine virus, which Innate immediately senses is damaging. This effects involuntary sensory abnormally, impressing itself as such upon Innate. This involuntary sensory nerve bundle within the cranium has its corresponding motor area; the latter tract now receives abnormal sensations, making adaptation accordingly.

This motor area controls motion produced by contraction of muscles; hence, we have an abnormal or excessive contraction along the path of these nerves to which this bundle goes. This is the chill or invasion period, which is the rigor of involuntary muscles in their endeavors to throw off poisons, always preceding

all fevers. The greater the poisoning, in strength of quantity, the greater the chill and chronic results that follow.

Pressure upon nerves exists only as they emerge between hard substances, the excessive contraction of muscles around intervertebral or spinal foramina produces the occlusion; pressure is the result. This is the second or period of fever, continuing until earthy matter is burned out of the bones, after which the recuperative, desquamation, eburnating, or third period follows.

Poison inhaled will produce fevers located in the chest, as pleurisy, lung fever, etc., the reason being that sensory and its corresponding motor make a complete circuit by way of the brain, returning to the same tissue.

This intelligently explains the how and why some fevers are contagious and run in epidemics. They are contagious so far as foreign substance produces a specific cause in the body which manifests fever effects. (See "Cycles," Vol. 5.)

The degree or progress of any disease depends entirely upon how great the pressure. It is an established mechanical principle that light pressure stimulates; a heavy one paralyzes.

In all diseases we have two divisions—too much or not enough activity of one or more functions. Of the kidneys we have Bright's disease or diabetes; in the bowels, constipation or diarrhoea.

We have explained how poisons can produce disease. Let us briefly study the opposite in understanding how massage, baths, magnetic treatment, etc., do in many instances relieve diseases without giving Chiropractic adjustments.

Poisons produce rebellious actions, excessive contractions. These follow the introduction of irritable substances. That which is soothing, quieting, lulling or relieving produces a relaxed condition of voluntary and involuntary muscular systems, putting the body in a complete receptive condition. The slightest movements made when completely relaxed often produce accidental adjustments, thus restoring functions as easily as if done by a scientific adjustor. This can happen only in those cases where the vertebrae are not misshapen by arthritis. It is well known to Chiropractors that when patients are relaxed an adjustment can be given much easier than when braced.

Innate has sensory and motor nerves in all parts of the body. Educated intelligence has nerves of each only in those parts that come in contact with the external, as head, the senses, extremities, anus, lungs, but none of the internal, digestive, assimilative, calorific, secretory, excretory, lymphatic or circulatory systems.

Every fibril has its functions to perform; there is no anastomosing as in the circulation of the blood. A ganglion is a tying place for fibers as they separate from the cable coming from the brain, where they originate.

There is no act performed in the body but what is under the direct control of a voluntary brain system.

Mental impulses in normal quantity mean perfect health to all tissues. All impulses originate in the brain, from there are transmitted to the nerve fibril whose duty is to carry that function through soft tissues to its nerve plates by means of which it expresses the action or errand given to it.

To have brain pressure is impossible unless external violence on the skull was previous. The spinal column is so composed that it is impossible for the vertebræ to become completely separated from their articulations without an accompanying fracture. Brain pressure and fracture of spine occur so seldom that we will not consider them at present, but it is a daily occurrence to those so educated to see the majority of people with subluxations existing without their knowledge.

We have shown how one or more functions have nerve fibers coming through the same foramen, the kind of disease existing at nerve endings depending entirely upon the degree of pressure and combination of functions involved. This accounts for the endless amount of combinations in symptoms. It is these that physicians of all schools wait to see develop before they can name the disease. Why? They have no knowledge of the cause. If they did, and had a Chiropractic education, they would adjust, and not wait for symptoms to develop. They would fix the cause instead of treating effects.

To have pressure, there must be a soft substance between two hard. There is no place in the body where nerves are entirely closed between two hard substances, as at the intervertebral foramina; therefore, 95 per cent of pressure is at this point.

One hundred per cent of impulses is health. Produce a pressure of 30 per cent and the disease manifests an equal loss. This is sickness, pure and simple. What ought to be done? Should we stimulate the remaining 70 per cent by one of a thousand methods, aim to have the remainder do the work of 100 per cent? Is that logical and in accord with facts? No. A Chiropractor can adjust that subluxation, release pressures upon nerves, restore impulses to 100 per cent, after which Involuntary sensory, motor and other functions will rebuild torn down tissues, repair parts to normal, and health is the inevitable result.

"Pressure on nerves of a corpse."

"Dissection stiff."

"Nerve sensation."

"Cause of disease."

Life—functions; Health—normal functions; Disease—deranged functions; Death—no functions.

A live nerve, like a live wire, is made so by the current sent through the wire from a dynamo, and through the nerve from the brain. Each may be said to have functions.

A subluxation that pinches, or passes upon a nerve, may be likened to a rheostat on a live wire. The rheostat interferes with

the current, changes the functions of the wire, also the motor or lamps on that wire. While in the case of a rheostat it is supposed to regulate the current by the resistance, it may interfere with or derange functions of the wire, also the motor and lamp, putting both motor and lamp out of service.

When a dynamo is burned out (dead) it can no longer create or propel the current through the wires and the wires cease to have functions to perform as before, and the rheostat that once kept back, or resisted, changed or deranged the functions of the wire, no longer interferes with or has any effect on the functions of the wire, as the wire has ceased to have function; therefore, the presence or absence of the rheostat does not change the system, or any part of it; and in such a case it should be removed and then put back again without affecting the lamps or motor that were once active but are then dead (have no functions.)

Should there be a corpse that had subluxated vertebræ pressing upon nerves, in that case there would be no functions interfered with, as there would be no life current to be sent (the generator or generating force being absent in the human body), and the presence or absence of a subluxation would make no change in nerve function; without being changed they could not be function deranged; therefore, there could be no disease nor life expressed.

In referring to animal life, disease, death; death does not come until disease is finished. Disease, when it is finished, brings death. Disease is but deranged functions. No function (death) does not come until deranged functions (disease) is finished. Deranged functions, when finished, bring no function (death). Therefore, deranged functions (disease) is the product of subluxations, displacements, and death is the product of deranged functions (disease).

No function (death) will not be further commented on in this, but deranged functions can be made normal in the human body by Chiropractic (hand fixing). A Chiropractor replaces the displaced vertebræ, increasing the caliber and capacity for transmission through the impinged nerve, so the nerve function can become normal. With normal nerve functions we may be said to be in health.

The brain is the instrument of the mind, which is the generator or generating force of the nervous system. The so-called "nerve supply" is in reality but a *mental current* sent through the nerves by the brain and is the real life current, the life of the body, and it is thus carried to every organ of the body.

The generative force, sending the life current, causes the nerves to have work to do—to perform functions. Thus it is that all functions of the body are made and controlled by the Intelligent mentalities of man.

Any interference with the normal action of the nerves in carrying the life current deranges their functions and thereby

deranges the functions of organs to which they carry the life current. Deranged functions is disease and is caused by displaced vertebræ impinging the nerves. Deranged functions can only be made normal by having the displacements replaced, giving free and normal action to the nerves.

Live things alone are sensitive; the nerves are filled with life, which they are carrying to the various organs of the body, and they also carry impressions to the brain, where they are interpreted as sensations when the intellectual mind, through the medium of the brain, interpreted them.

IMMORTALITY.

What is life, disease, death, and immortality?

These questions have been asked of savants of all ages. They have remained unanswered until the advent of Chiropractic, which will, in time, lift the curtain that hangs between this life and the one beyond. This philosophy has given an intelligent explanation of disease, and now I shall attempt, for the first time, to give a comprehensive explanation to the other three questions.

What is life? How did it create this human mechanism and continue it as a living entity? From whence does it come, and whither does it go? What is it?

We are acquainted with the outward manifestations of life, disease and death, but these are only symptoms of something real which the human race has desired to know. We have an instinctive longing to get back of these. We want to know comprehensively the cause of each.

Last, but not least, we possess an inherent craving, an aspiration to know what there is beyond this life, what of the immortality of the soul, spirit. Innate conscious living intelligence, that never had a beginning, nor will it have an ending.

I do not pretend to fully comprehend any one of these questions; but Chiropractic has opened the door of intellectual reasoning that will eventually enlighten the world on these important subjects.

Man is a dual entity. He is composed of the mortal and immortal—the everlasting—that which always existed and always will.

The outward manifestations, the symptoms, so to speak, are patent to all. Its senses, five or more, make the life of the physical evident. Its functions are made manifest in procuring comfort and sustenance from its maintenance.

The Innate Intelligence, known by names, soul, spirit, nature, instinct, subconscious mind, and intuition, has duplicate senses in the Educated mind. While the latter cares for the outward needs of the body, the former looks after the welfare of the interior through its varied functions. Each has its special work to perform.

The physical body starts from the fecundated germ, is given life by the male spermatozoa, proceeds to develop the embryo, and thence forms foetus.

That which we are pleased to name the Innate (born with) is transmitted by the spiritual mother, and it is not a part of the outward physical, but of the spiritual; it never sleeps nor tires, is not subject to material laws or conditions; does not recognize the darkness, or distance, time nor space. It continues to watch over the functions of the body as long as they constitute a dual being.

As the scion was a part of the original stock, and is not the embodiment of a new plant, shrub or tree until severed, so is Innate a part of the mother, and not another being, until separated from the parent. Innate is sexless.

Innate has its own consciousness; it is not dependent upon the body for its existence; no more than we are on the house we live in; its immortality, its external existence; does not rely upon the life of the body it inhabits. It is invincible, cannot be overcome by material changes. It is invulnerable and not subject to wounds or injuries.

Innate is not the educated mind, the thinking quality with which we are familiar. The functions of the brain, upon which the mind depends for outward expressions, are, like other functions, under the control of the Innate. It is behind thought and expresses itself by that means. It can set aside, for consideration, the sensations, emotions, passions, desires, or any other mental phenomena, or physiological functions, and thereby receive educational impressions through it.

Innate is self-existent, remains unchanged, is not a part of mental or physical manifestation; but instead, controls these, when not hindered by diseased conditions, caused by displacements of the skeletal frame. The brain does not create the mind any more than the rose does its color and odor.

The attributes of the mind are under Innate's control. Its quality and characteristic attainments are not a part of it. It is the director of intelligence, is not its slave, but its master. The brain is a medium through which Innate manifests itself. This intelligence pervades the universe. Each being is a branch, as sunbeams radiate from the sun. You may call this universal intelligence—God, if you choose.

During the condition known as trance Innate is not able to express itself through the educated brain. This condition simulates death, in which there is a total suspension of the power of voluntary movements, with abolition of all evidence of mental activity and the reduction to a minimum of all the vital functions, so that the patient lies still and apparently unconscious of surrounding objects, while the pulsation of the heart and the breathing, although still present, are almost or altogether imperceptible.

In this state or condition the soul, spirit, or Innate had passed out of and away from the body, existing separate and dis-

tant from its earthly dwelling. Such was the condition of a recent patient. On one occasion she lay for nineteen hours apparently dead, pronounced so by three physicians. Four hours before the appointed funeral life was observed by moisture on a mirror, which had been held on her face. She was returned to her earthly existence by Dr. Jim Atkinson, deceased, who, during life, was thought a crank.

While in the trance, the body is practically dead; but the Innate conscious being is active, taking in scenes of this and the other life. On several occasions, when this patient returned to physical consciousness, she regretted having returned, and would say, "Oh! why did you bring me back?" A glimpse of the life beyond created within her a longing to be back with her friends, whom she saw and with whom she conversed.

I know from daily experience, of which my five senses are in evidence, that some persons who have lived in this life continue in intelligent existence. My spiritual knowledge has come to be material, for it is an expression of consciousness by all of my five senses. There are many forms of material, as judged by our sensory faculties.

In coma and concussion of the brain, the patient does not recall any experiences during the period of unconsciousness. There is a vast difference between trance and coma. In the former, the conscious intelligence is not restricted by substance darkness or distance, as in pathological coma. In the latter there is no educated means of expression through the functions of the body wherein it is confined.

The life, of which we are acquainted, is of the physical, which exists as long as Innate occupies the body. To be able to perform the functions of the body is to live.

Disease consists in deranged functions.

Functions may become so extremely abnormal that Innate cannot maintain control, making the body untenable. This dissolution we call death. Immortality is the life entered as Innate at its birth. The former birth being that of the physical, the latter of the spiritual.

BACKBONE VARIATIONS.

The backbone is also called a spine, or spinal column, because of the projecting spinous processes; spina, meaning thorn. It is also named the vertebral column, from its being built and composed of vertebrae. Vertebra, derived from *vertere*, to turn, as these segments are capable of turning upon each other.

The spinal column is highly complex. In therapeutical schools it is given but little attention, whereas, it should receive as much as the rest of the skeletal frame. It is the central axis and the backbone of the human body, it protects the spinal cord from injury; to it the ribs are attached, it supports the weight of

the head and trunk, transmitting their weight to the pelvis. It gives attachment to the ribs. By being flexible, it is endowed with diverse movements; although composed of many segments, it is firm and strong.

The region over the spine, extending from the occiput to the sacrum, is of special interest to the Chiropractor, for in this locality is found the cause of disease. It is especially necessary that he should be familiar with not only the external prominences, but also know just what he feels under his hands. Our immense specially selected *collection* of vertebrae aids the student in a knowledge of the abnormal conditions existing out of sight. The surface markings, except the first and third, of the spines, can be easily felt and located by an experienced Chiropractor.

In the normal column we find thirty-three vertebrae; thirty-seven, if we count four in the skull, as given by Gray's Anatomy (fourteenth edition), where he says, "The skull, or superior expansion of the vertebral column, has been described as if composed of four vertebrae, the elementary parts of which are specially modified in form and size, and almost immovably connected. These vertebrae are the occipital, parietal, frontal and nasal."

The segments of this superior expansion, like the inferior, or sacrum, become joined by ossification, in adult life. It is, like those below, liable to be increased by one or more segments, from as many ossifying centers, named in this superior expansion, wormian bones. They are occasionally of large size, the opposite sides somewhat regular in shape, and divided from the other by sutures. The superior and inferior expansions of the vertebral column are divided by sutures into two classes, the false vertebrae, those that are composite, made of several bones and fused in the adult; and the true, or movable, which continue so throughout adult life.

The second group is that of the cervical, which seldom varies from the regular number, being made correspondingly thinner or longer, according to its length. There are two exceptions to this rule—the three-toed sloth has nine, one of the two-toed kinds has six, a swan having twenty-five, the sea-cow six. The long necks of the giraffe, ostrich, also of the short neck of the whale, have seven cervical vertebrae.

I would like to divide this group into sub-groups, the atlas and axis being so peculiarly different from the other five in shape and use that there is less resemblance between them than the three different orders or true vertebrae.

The third group, according to the usual arrangement, is the dorsal, or thoracic. It includes the next twelve in the normal column; this number is occasionally increased or diminished by one, being compensated by a corresponding loss or gain in the lumbar; when such is the case, we have the same number of

ribs, that of eleven being more rare than thirteen. When decreased, one rib on each side will usually be found to have the sternal ends dichotomous. If increased, the last pair, or floating ribs, will be attached to a duplicate of the last dorsal. I have never known of a greater variation in the number of vertebrae, either way, except in one instance, and that is the unique specimen which *The P. S. C.* possesses. The first seven dorsal centra coalesced into one, with seven spinous processes, fourteen transverse processes and fourteen ribs. The ribs and processes are encircled half way around, similar as the spokes of a wheel converge in one body.

The last dorsal and first lumbar have a peculiarity that is distinctly characteristic, the mammillary and accessory processes being enlarged to form locks, a compensation for the transverse processes, preventing in a great measure the displacement of their articular surfaces.

The fourth group, of lumbar vertebrae, consists usually of five. This number may be increased or decreased by one. If lacking, it is attached by one or both ala to the sacrum. If increased, it is a duplicate of the fifth, the sacrum having four vertebrae instead of the usual five. The only variation from one above, that I know of, is in the unique specimen, where the bodies of the last four lumbar are coalesced into one, having seven intervertebral foramina, four spinous and eight transverse processes.

The sacrum is the inferior expansion of the vertebral column. It articulates with ossa innominata, like the superior. It becomes coalesced in adult life; in infancy it is ordinarily composed of five distinct vertebrae. It is similar to the other four groups in that it may be increased or diminished by the addition of one vertebra.

The tail end of the spinal column, or appendage to the sacrum, seems to be a vestigial remnant of our progenitors, a connection with the animal kingdom. I fail to see that we, as human beings, with a sitting propensity, have any use for it; in fact, it is quite a disadvantage, being in the way, and subject to frequent injury, causing much trouble without any corresponding benefit. Gould and Pyle mention, in "Human Anomalies," several cases in which the coccyges were elongated into tails, some of which contained tail vertebrae. Every decade notices a decrease in the number of these vertebrae. Five being usual; now four is considered normal. The variation consists of three to five vertebrae. It is liable to become flexed anteriorly or laterally, and ankylosed to the sacrum.

The spinal column is the central axis of the skeleton. It supports the head superiorly, ribs laterally, and through them the weight of the upper extremities. The head rests upon the lateral masses of the atlas. Then transferred to the superior articular surfaces of the axis; from there to the body of the third, and

slightly to the articular processes by way of the strong arch of the axis. From this the weight is transmitted downward, mostly through the bodies of the vertebrae, and partly through the articular processes to the sacrum, thence to the hip bones and to the lower limbs. If all vertebrae are normal in shape, the weight is conveyed in the medial axial line, and the owner walks erect. These conditions are not always to be found. Innate occasionally builds deformed vertebrae, oftener of the first three cervicals, or last lumbar; the former causes the head to lean toward the lower or thinner side. The last lumbar is frequently found ankylosed to the sacrum by one or both alæ. In such malformations there is more or less tilting of the hips, a defective gait which corresponds to the abnormally deformed sacrum. Displaced vertebrae, whether accompanied by fracture or not, cause a deviation from the axial line.

The spine is a flexuous and flexible structure, composed of bony segments, between which are interposed elastic fibrous cartilages, called discs.

Flexation, extension, and rotation have a normal limit, to a more or less extent, in all parts of the spinal column; these various movements are due to these elastic cushions. The intervertebral cartilaginous discs are not always of the same consistency or elasticity, the difference depending upon age and whether they have been subjected to excessive heat, better known as fever.

A vertebra does not rotate on its central axis. The rotating center is confined to the articulating processes. The normal deviation of each vertebra is as three of the body to one of the posterior arch and processes.

Cartilage of the vertebrae are liable to be fractured or separated from its adjoining bone by wrenches; such cannot be united as are the bones and other tissue, for they contain no nerves or blood vessels. Such fractures, whether the cartilage itself, or where it is united to the centra of the vertebrae, are repaired by Innate Intelligence encysting the break, ankylosing the two vertebrae with osseous material, which, when hardened, is named exostoses.

The nodding or rocking of the head is largely dependent upon the articulations between the occiput and atlas. When we observe the great variation in the shape and size of these rockers, we no longer wonder why we readily recognize our acquaintances, at a distance, by their distinctly peculiar movements of the head. The occipital condyles, or head-rockers, are of various curves of convexity and obtuseness, approaching more or less anterior and deviating accordingly posterior, nearer in front and diverging behind. To get a comprehensive idea of the unlimited variety of natural movements, let us think of rocking chairs with as many shapes as we find in condyles and their atlas articulations. Some are flat, or nearly so, which would allow but little rocking movement, no more than a straight curve. Others have symmetrical

curves, suggesting that the person in such a rocker could not well resist a continual motion of the head. Occasionally we find the articular surfaces of condyle rockers divided into two separate parts by an open space, near the center. To comprehend the peculiar jerky movements this would give the head, let us consider what a difference a notch in the center of one or both rockers of a chair would make. Some condyles are of a V shape, the apices of the atlas articulations are in the center and pointing downward. We can well imagine the awkward rocking motion of such, whether in the human or a rocking chair. Add to the above differences the third occipital condyle that articulates with the odontoid; what differences this would make in the movements of the head is difficult to imagine. To my mind, it would be like adding the fifth wheel to a wagon. We must also take into consideration the changes made by fractures in disease, and that no two atlases are articulated alike, or of the same shape, weight or size. Some are smooth, others rough; some heavy, while others are light; some have no spinous process,—in fact, such is the rule,—while there are those which have prominent neurapophyses, or an open arch instead. The usual horizontal position of the head may be varied by an obliquity of the atlas, anterior, posterior or laterally, which, although slight, would make a variation in the carriage of the head conspicuous. These deviations are largely due to the difference in the thickness of the lateral masses of the axis and the obliquences of the anterior articular surfaces of the odontoid. A change in the position of the head may be caused by a fracture of the neck of the odontoid, which, when healed in an abnormal position or absorbed as a waste portion of the osseous tissue, allows the posterior arch to rest on that of the axis, or the atlas may be crushed into the jugular process on one side, as shown by two specimens in *The P. S. C.* collection.

These different movements of the head and positions in which it is carried are generally thought of as habits, but when we study them from an anatomical point of view the cause is explained.

The rotation of the head is mostly done by the atlas revolving on the axis, the first on the second vertebra. A cursory examination of the articulations between the masses of the atlases and axes of a hundred specimens reveals many shapes and sizes, all of which would produce different movements.

Rotation, flexation, extension, and contraction exist in all parts of the spinal column. The extent of these varied movements are subject to the positions of the joint surfaces, the amount and quality of the articular and intervertebral cartilages. The cervical vertebræ are allowed greater freedom of motion than the dorsal or lumbar, because of a large spinal foramina, absence of ribs articulating with transverse processes.

Persons differ in their gait and carriage while moving or standing. This is largely due to the different formations, size and

shape of the sacrum. A study of a large number of sacra in *The P. S. C.* collection will corroborate this. Rotation of any portion of the spinal column is produced by each vertebra turning slightly upon the one below. This produces a lateral deviation of the spinous processes and a divergence of the transverse in proportion to the amount of rotation. This turning from the axial line is permitted to a certain degree without injury. More than normal causes an M. D.'s sprain, a Chiropractic subluxation. A displaced vertebra, a Chiropractic subluxation, a separation of one or both articulating processes, produces three times the displacement of the anterior of the bodies, as is the apparent difference in the spinous processes. This is true in a rotary, lordosis, or a kyphotic curve. The Chiropractor should be skilled in these, which can only be acquired by education and practice. The inquirer for a correspondence course will see how futile such would be.

If the spinal column is not prepared for an unexpected strain, it is more easily wrenched than when the muscles are made taut by expectancy. If the violence is extreme, something must give way, either one or both of the intervertebral or articular cartilages wrenched from their osseous connections. Such injury is, to all intents and purposes, a cartilaginous fracture and, like those of the costal, is repaired by deposition of bony material in the form of ferrules, bands, or straps for the same purpose, and in a like manner, as a blacksmith would mend a broken wagon tongue. This symphysis produces ankylosis between two or more vertebræ, so that the joints are lost. Vertebræ wrenched from their normal position may be replaced intuitively by the traction of muscles, or scientifically by the hands of a Chiropractor. If the subluxation be such as to form a kyphosis, or a lateral rotation, the intervertebral foramina will not be occluded, the nerves passing through them will not be pinched. If the subluxations assume a lordosis or scoliosis, the size of the intervertebral foramina will be decreased, causing the pressure upon the nerves found therein, and producing pathological conditions at the peripheral ends of the affected nerve fibers. If an excess amount of heat is produced by the impinged calorific nerves, the result is a softening of those bones in which they end and the cartilage adjoining. If a great degree of heat is continued for a length of time, the cartilage is destroyed and the bones become carious and necrosed.

This undue amount of heat is conducted to the bodies by the discs of intervertebral buffers. It not only produces softening and caries of the vertebræ, but absorption of the intervertebral and articular cartilage. These diseased conditions change the shape of the vertebræ and consequently the individual's movements, thereby establishing a peculiar gait by which we readily recognize the owner.

Occasionally the anterior root of the transverse process of the seventh cervical exists as a separate bone. It is then known

as a cervical, or homologous rib, specimens of which may be also seen in *The P. S. C.* osteological collection.

The bony landmarks of the vertebral column are very important to a Chiropractor. It is surprising to a medical man, or to a new student, to see how readily an old Chiropractor determines the position of each vertebra. In this "practice makes perfect."

The spinal column, in fleshy persons, is less conspicuous to external observation than those who are thin. There are but few in which an experienced Chiropractor cannot locate each and every vertebra. The relative position of the atlas can be located by the space between the spinous process of the axis and that of the occipital. If the space above or below is less normal, we reasonably conclude that the nerves are pinched in the grooves. In many persons one or both of these are converted into foramina by an osseous bridge, thereby protecting the veins, arteries and nerves which pass through them.

The third cervical has a spinous process that varies from a tubercle to that of one as long as its neighbor above.

The spinous processes of the 4th, 6th and 7th, in the order named, commonly increase in length, the last being so prominent that it has received the special designation of the *Vertebra Prominens*. Sometimes the sixth has a process equal to that of the seventh.

The dorsal spines are very oblique; it should be remembered that their tips do not correspond on a level with their bodies. Also, that the six central spinous processes are liable to be bent to the left or right. This must be taken into consideration when making a topographical survey.

The epiphyses of the spinous processes do not unite until near adult age. Before they become apophysed they are liable to be displaced, torn loose from the diaphyses and absorbed, as are other useless pieces of bone, leaving the spinous process shorter than its fellows. This difference, which is readily apparent to the Chiropractor, might mislead a beginner and cause him to think that the vertebra was displaced anterior; but he learns better when he finds the transverse processes are all in line.

The Chiropractor is especially concerned in the intervertebral foramina, which are formed by the pedicles being notched above and below, so that when in apposition they make a smooth opening for the transmission of arteries, veins and nerves. The occlusion of these foramina would restrict the flow of blood to and from the heart, were it not for anastomosis, intercommunication, the arteries of the spinal cord anastomosing freely with each other, but when impinged nerves are deranged in their functions, mental impulses that incite action cannot be transmitted over another line.

The construction of the various segments of the vertebral column insures the safety of the spinal cord from ordinary violence; the vertebral bodies, arches and discs are well adapted to

resist the effects of compression, the intervertebral cartilage acting as buffers in resisting shocks and permitting the elasticity where the greatest movements are required; the spinal canal is enlarged accordingly, so as to allow greater flexion without compression.

The adult skeleton is composed of 200 bones. This does not include the six small ones of the ears, the thirty-two teeth, nor the wormian bones of the skull. The vertebral column has twenty-six, the skull twenty-two, upper extremities sixty-four, lower extremities sixty-two, the hyoid bone, sternum and ribs make twenty-six.

The bones of young persons are comparatively smooth; they become darker in color and rougher as they advance in age. Those of the male are coarser and larger than those of the female. Bones which have been subjected to excessive heat, generally known as fever, are yellow.

The bones of the body vary greatly in their texture, depending largely upon the different degrees of heat that they have been subjected to. Any or all of the bones of the body are softened by excessive heat, and hardened by a lack of it. Bones that are made preternaturally soft or hard depend upon what functions are affected. Those of the central dorsal nerves, when impinged, have an effect over the whole of the body, producing osteomalacia. If the patient survives the heat period, then diseased conditions go to the other extreme, the temperature goes below 98 degrees, and eburnation or hardening of bones follow.

Spontaneous fractures are those in which the bones have become fragile, very soft, flexible, waxy and friable. This state is produced by ostitis. Conditions produced by an undue amount of heat are known by the names of osteomalacia, mollities ossium, the softening depending upon the loss of earthly matter which has been removed by too much caloric. These are usually accompanied by caries, necrosis, burrowing abscesses, bone tumors and osteosarcoma.

The bones may be fragile or so soft that they can be easily cut with a knife. Osteomalacia differs in degree as do other diseased conditions. This variation may be due to the difference in degree of functions and the manner of injury. Medical men have made much inquiry by investigating the effects. Chiropractors search for the cause.

Mollities ossium is a disease of bones in which they become flexible and lose their natural firmness. This is well illustrated by a case given in *Cooper's Practical Surgery*, page 310: "She had a fall which occasioned her to keep in her bed for some time, and felt great pain and weakness in her loins and lower extremities. In about a year and a half she began to perceive that her left leg was particularly affected. Along with her weakness she had violent pains over her whole body, which increased after a miscarriage, and still more after a natural delivery. She was then seized with startings, great inquietude, and such violent heats that

she was almost continually in a sweat and could not bear the least covering even in the coldest weather, and while her pains continually increased, she took notice that her urine precipitated a white sediment. Her pains abated upon the appearance of the sediment, but she now observed that her limbs began to bend, and from this time the softening of them gradually increased till her death.

"The trunk of her body did not exceed twenty-three inches in length; the thorax exceedingly ill-formed, and the bones of the upper part very much distorted; those of the lower part were very much bent, and the thigh bones became so pliable that her feet might easily be laid on each side of her head. She had violent pains, startings, difficulty of breathing, spitting of blood, and lastly, a fever, with convulsions. Dissection showed the bones were entirely dissolved, the periosteum remaining unhurt, so that they exhibited only the form of a cylinder."

On page 811 of *Cooper's Practical Surgery* a case is related, the special points of which are: The bones were fragile before they became soft. These conditions began with "pain through the whole body, attended with feverish symptoms." She broke her leg while walking from the bed to the chair, the bones were heard to snap, there was no callus formed. Then the bones began to grow flexible. Toward the end of her life her breathing became difficult, the spine distorted, every movement of the vertebræ gave pain in the lumbar region. The tuberosities were so soft that they "spread much," on account of that she was obliged to sit upright in bed. The ends of her fingers and thumbs became very broad by frequent endeavors to raise herself. At her death it was found by measurement that she had lost two feet two inches in length. All bones, except the teeth, were so soft than they could be cut with the knife. The bones contained a quantity of oily matter and but little earthy.

There is one characteristic feature to which I desire to call the attention of the reader which enters as a prominent factor in the variation of the vertebral column, from youth to senility, *i. e.*, the effects of age on joints, for, bear in mind, that they are not alike in any two periods of life.

In the normal backbone there is a continual change in the texture, shape and size of the vertebræ and in the intervening cartilages. They do not arrive at maturity until adult age; even after this they continue to undergo continual modifications.

From infancy to old age there is a vast difference in their structure, due to occupation, diet, natural changes, as age advances and diseased conditions imposed upon it by mishaps which derange their relative position to each other.

Not taking into consideration the many and varied changes by accidents, which wrench the vertebral column, causing Chiropractic subluxations, there are great differences existing at various periods of life.

In the infant the edges and surfaces of the intervertebral cartilages are round and smooth. One of the most important fea-

tures to a Chiropractor is that this portion is supplied with blood vessels. Diseases of the joints and bones are caused by the lack of Innate current subsequent to their displacements instead of being inherited.

JOINTS OF THE VERTEBRAL COLUMN.

The spinal column is composed of thirty-seven irregular bones, named *vertebræ*. The twenty-four of the cervical, dorsal and lumbar are separated through life by discs of fibro-cartilage. These are named true, or movable, *vertebræ*, in contradistinction to the four of the skull—the superior expansion—and nine of sacrum and coccyx. These fourteen are called false, or fixed, *vertebræ*, because of their becoming consolidated. These bony segments are variously modified in different portions to serve special purposes. It is the object of this article to notice the articulations of this flexuous and flexible column.

The five bones of the upper part, the nasal, frontal, two parietal, and the occipital, correspond in their expansion to those of the sacrum. In the adult they are immovably connected at their borders by sutures, which are really closely fitted seams or articulations. These joints are filled by a fibrous membrane. In some places it amounts to a thin layer of cartilage. The bones of these synarthrodial articulations have borders that are dentated (like teeth), serrated (notched like a saw), limbous (overlapping), or false sutures, where there is a simple apposition of two continuous rough surfaces. Some cranial sutures combine two or more of these varieties. In advanced life the bones are fused, because of the membranous symphysis of the sutures becoming ossified.

Nowhere in the skeletal frame do we find as great a variation in construction as in the edges of these five cranial bones. This deviation is greatly increased by interposed *ossa wormiana*, which correspond to the sesamoid bones in other parts of the body. They vary in size from that of a pin head to one and a half inches in breadth and three in length. They assist in filling the gaps and the mobility of the cranial bones. The diversity in shape is so varied that it is impossible to find one that will fit in the place of another. The student should be provided with at least two skulls, one disarticulated, the other vertically bisected.

The sacrum forms the lower expansion of the vertebral column and consists of five pieces. During early life these are separated by temporary hyaline cartilage between the articular processes, bodies and lateral masses. About the eighteenth year the two lower segments unite by the intervening cartilage becoming ossified. This process gradually extends upward until all parts are joined. Between the twenty-fifth and thirtieth year they form one solid piece. A similar process attends the four bones of the coccyx. Often the first segment is united with the sacrum, giving

it the appearance of six vertebræ. Previous to coalescence they are liable to be subluxated, the same as true vertebræ. The auricular borders of the sacrum and ossa innominata are articulated by a synchondrosis joint, the intermediate body being hyaline cartilage, which covers the auricular surfaces of sacrum and ilia.

Between the axis and sacrum there are twenty-three amphiarthrodial joints which unite in an intimate manner the corresponding surfaces of the bodies by cartilage. This is firmly attached to the upper and lower surfaces of the centra. The four curves of the spine are largely due to the wedge-shape of the cartilaginous discs. They are the thinnest between the second and third cervical, from which they gradually thicken as they proceed downward. It composes one-fourth of the length of the movable part of the column. Near the center of each is a pulpy nucleus resembling a synovial sack. These intervertebral cartilages are elastic, tough and compressible. They serve as buffers in resisting shocks and contribute very much to the elasticity of the spine.

There are fifty arthrodial, or gliding, joints *between* the articular processes of the true vertebræ from the occiput to the sacrum. These are formed by continuous plain surfaces, one slightly concave, the other equally convex. Their facets are covered with articular cartilage, which does not ossify except when exposed to excessive heat.

The first two of these joints are usually large and oval. They approach each other in front and diverge behind. Their individual shape is greatly diversified, no two pairs being just alike; in fact, the two of the same person are often quite dissimilar, as shown by a hundred specimens in *The P. S. C.* osteological collection.

The two condyles of the occiput correspond in figure to their mates, except that those of the atlas are concave, those of the skull convex. The surfaces of these and the next two pair, between atlas and axis, face each other nearly horizontally. While those between occiput and atlas are kidney-shaped, the atlas and axis are circular.

As we descend, we find the surfaces of the next thirty-four articulations face each other obliquely, the last twelve nearly vertically. The transition is usually between the dorsal and first lumbar. This may occur at one above or below, while their mates on the opposite side face vertically.

Between the atlas and axis are two trochoid articulations, pivot joints, one on the anterior and the other on the posterior of the odontoid process. The ventral facets are oval and face each other vertically. The posterior is formed by a thick, dense, strong transverse ligament, clad in front by cartilage which articulates with the odontoid bone, or "processus dentatus."

Movements.

The various movements of the many joints of the vertebral column are modified by the shape of the articulating surfaces, the

thickness of the intervening cartilage and the connecting ligaments.

The skull is formed by a series of modified vertebræ which compose the neural arches. They are greatly expanded to enclose the brain, similarly as the true vertebra surrounds its extension or the spinal cord. The cranial nerves pass through the magnum foramen. How much may be learned by Chiropractors of nerve pressure in the superior and inferior expansions of the spinal column is yet to be determined. The science is not yet fully developed; there remains much to learn. At this date we have just worked out a knowledge of cord impingement in the sacrum and coccyx.

The cranium may be deformed by synostosis, the sutures of which are often affected by arthritis. Irregularity, want of symmetry, may be caused not only by the premature closing of one or more sutures, but a portion, usually one-half, not being supplied with the normal amount of nutriment, remains in a micromegalic condition. Remember, all functions, including that of nutrition, are under the control of appropriate mental impulses. In hydrocephalus, wher the head is abnormally large, the bones are forced apart by a surplus of water, their borders continue to grow toward each other, the intervening gaps partly filled.

The permitted movements between head and atlas are those of nodding, or rocking, forward or backward, with slight lateral motion. This ginglymoid articulation is a hinge joint, composed of two condyles or knuckles, which rock in two elliptical cavities of the atlas. These elongated articular heads are semilunar from front to back and convex from side to side.

The articular surfaces of this joint vary much in shape, as shown by fifty skulls and two hundred atlases in our possession. Some are very concave and convex; others are flat or nearly so; many have a bifurcated V shape. Often the two are not similar in shape or size. Occasionally we find three occipital condyles. The two normal being placed farther apart anteriorly, so as to make room for the third.

The extra condyle is a tubercle situated on the basilar process between the anterior ends of the normals and articulates with the apex of the odontoid process. Observers will notice that the summit of the odontoid approaches very close to the basilar process, even where there is no articulation.

With this innumerable variation in the shape of rockers, is it any wonder that we are able to recognize our acquaintances by their peculiar head movements? These occipital rockers may be likened to those of a chair, which, if curves are uniform, not too convex, or flat, the two properly approaching each other, only that the proximate ends are vice versa, then movements will be easy to perform and esthetic. But if one or both form an angle at the center, or base, with a groove at vortex, we would not admire the use of such a rocker. Many of the atlas articulations

are built thus. Let it be remembered that no two of us are any more alike in our osseous, vascular, or nervous makeup internally than we are externally.

Between the atlas and axis are four joints of two kinds: that of the arthrodial, between the masses where the surfaces glide on each other, similar to the fifth wheel of a wagon, and the two trochodial on the anterior and posterior of the odontoid process. Here the movement is limited to rotating the atlas and the head in a semicircle. An examination of these joints presents many shapes and sizes of the two facets on the odontoid and its articulating facet on the interior of the ventral arch of the atlas. These variations cannot help but make their corresponding diversified rotary movements.

There are fifty-four articulations between axis and first lumbar. Eighteen are amphiarthrodial. They form the symphysis between the bodies and permit slight movement. Thirty-six are arthrodial, of the articular processes, and allow motion forward, backward and lateral.

Very slight rotation is possible between the last two dorsal, owing to the mammillary processes being enlarged, forming a lock, which, in a measure, compensates for the lack of leverage support offered by the transverse processes found above and below, but here lacking.

This portion of the spinal column is more liable to injury by wrenches, which cause subluxations, than any other. A careful examination of the skeletons in the Army and Navy Medical Museum at Washington, D. C., demonstrated to the writer that a large percentage had suffered by a displacement in this region.

Between the first lumbar and sacrum there are fifteen articulations. The intervertebral discs, fibro-cartilage, between the bodies are the same in structure as those above. They are larger in every direction, therefore, allow more mobility. The superior articular surfaces face inward, backward and upward, while those above, backward, upward and outward. The articular surfaces of the lumbar are convex and concave. Their position does not allow but a slight lateral movement, but are adapted for forward and backward motion.

The individual movements are often modified by ill-shaped vertebræ, the bodies of which have been lessened or increased in one direction with a corresponding loss or gain in another. Remember, that one portion of a vertebra cannot be changed in shape without a corresponding alteration in all parts. All deformed vertebræ are made so by excessive heat, which softens, so that muscular contraction compresses them into an abnormal shape, making the various curvatures.

The heat may be so intense as to cause decay and death. The dead portion may be removed in fine particles with pus, or dry caries, known as rarefying osteitis, arthritis, without suppuration. The pus is decomposed serum. Caries does not depend

upon purulence. If the patient's death ensues during this period, known to the M. D.'s as fever, the vertebræ, whether deformed in shape or carious, will be found light, friable and soft. If the patient survives the period of excessive heat then the temperature will fall below normal; the parts which were overheated will become preternaturally hard, eburnated. The remaining portion of the affected vertebræ may coalesce. If so, the uniting is done while the parts are heated and softened, making a sharp kyphosis.

Any vertebra is liable to become subluxated, its articular surfaces displaced, the cartilage torn loose from one of the bodies. Innate Intelligence mends this break by osseous symphysis and ties the two to prevent further separation.

The vertebræ may be ankylosed by osseous material oozing out of one or both of the bodies, fusing the two together. The odontoid process may be separated from the ventral arch of the atlas; if so, Innate fills the gap with callus. It is the duty of the Chiropractor to adjust the displaced vertebræ; this done, Innate has no further use for the osseous callosity, therefore, removes it. Life and health may be prolonged by insuring the mobility of joints, more especially those of the backbone, from which all nerves, which transmit mental impulses of innervation emerge.

IDIOSYNCRACIES OF THE BACKBONE.

The spine is a flexuous and flexible column, composed of thirty-seven vertebræ, viz.: The skull, consisting of the nasal, frontal, two parietals and occipital. This superior expansion of five bones, like the inferior of the sacrum, become ankylosed in adult life.

The cervical vertebræ are seven in number. This holds good in all animals, with but few exceptions. The elongation of the giraffe over that of the whale is made by the difference in the length of the vertebræ. In man this number seldom varies. *The P. S. C.* has, no doubt, the largest collection of anomalous vertebræ in America, in which there is no exception to this rule, unless it be that of a second cervical, consisting of axis and third. While occupying the place of the two vertebræ, it is only the size of one.

There are twelve dorsal. This number is sometimes increased or decreased by one, which is usually compensated by the last lumbar being attached to, or a lack of one in the sacrum. We have only one exception. This is found in the unique monstrosity which has only six thoracic vertebræ, the first seven being coalesced in one body. A deviation of one more or less is accompanied by a corresponding number of ribs, eleven or thirteen pairs.

There are five lumbar. This number, like that of the thoracic, may be increased or decreased by one, the surplus or de-

ficiency being found in the dorsal or sacrum. The unique monstrosity is the only exception. It has only two lumbar; the last four are united in one centrum.

The sacrum is the lower expansion of five vertebræ which, like the superior of the skull, becomes united in adult life and forms one solid bone. The usual number is sometimes increased, and rarely decreased, by one. The extra addition may be accounted for by a lumbar or coccyx being fused by ankylosis.

The coccyx ordinarily consists of four vertebræ. It is, according to the Darwinian theory, a vestigial remnant of a tail. So far as known, civilized humanity has no use for it. The tuberosities of the ossa innominata are better adapted for the weight of the body in a sitting posture than the apex of the coccyx.

Backbones have a similarity, yet there are no two of them alike in color, shape or size. There are no two spines which have any vertebræ that can be exchanged without being observed by an anatomist.

There is a vast difference in the shape of corresponding vertebræ, more especially in the atlas, seventh cervical, last dorsal and fifth lumbar. Some of these are better adapted than others in their construction to withstand accidents which may displace the fifty-two articular joints. Besides Innate variations we find vertebræ that have taken permanent positions, caused by being forced beyond the normal limit. These displacements make lordosis, scoliosis and kyphosis, and such diseases as caries and spondylitis deformans, in which the bodies have been softened by excessive heat, partly absorbed, preternaturally soft or hard, ankylosis of bodies and processes.

We are no more alike internally than externally. It is no wonder that we readily recognize our acquaintances by their gait or their movements of the head.

SUBLUXATIONS OF VERTEBRAE ARE THE PHYSICAL REPRESENTATIVE OF DISEASE.

It is a well-known fact that nerves proceed from the spinal cord in bundles, or leashes, through openings along the sides of the vertebræ, and are distributed to the various parts of the body. These nerves contain efferent and afferent fibres. All sensation, pain and pleasure being due to the existence of the latter, all action, whether Innate or Educated voluntary, to the former's impulses.

Nerves emanating therefrom are liable to serious interference by displacements of vertebræ, caused by runaways, railway accidents, blows or unexpected missteps. These, though apparently trivial at first, may occasion very grave and most persistent symptoms.

Besides the products, viz.: sensation and motion, a subdivision of the latter has a set of transmitting fibers which convey calorificity, whose sole function is to express the proper amount of impulse, acting as an igniter for chemical combustion for the heating of the body. A pressure upon these fibers produces disturbance in their function, causing them to convey too little impulse, a recognized symptom in a certain class of disease, or too great a quantity, producing a condition termed fever.

In a study of the individual parts of which the spinal column is composed, we are forcibly impressed with the peculiar formation of the intervertebral foramina through which the spinal nerves pass, all of which are formed by the articular union of the two notches of adjoining vertebræ, the one above and the other below. This being the case, any accident or strain which will cause a displacement or subluxation of a vertebra necessarily changes its relative position of these notches. The arteries, veins and nerves that pass through this foramen fill it so accurately that any variation in its form or size, except when enlarged by a true kyphosis, will interfere with their transmission of impulses.

The first two pairs of nerves emerge from the spine in grooves above and below the atlas. These are as liable to be impinged and are as readily freed from pressure by Chiropractors as are the following twenty-three. The six pairs of sacral and coccygeal nerves are liable to be injured in adult life by fracture. The displaced fragments of bone partially occluding the foramina cannot help but impinge nerves. If allowed to heal in this position, a life-long pressure continues with the distress occasioned thereby. Before ossification, the cartilaginous parts of the sacrum are too soft to cause a continued constraining force.

All movements and sensations of the whole body, indeed, all there is of life, are due to the existence of mental impulses, their corresponding or cycling impressions, the interpretation thereof and consequent adaptation. When transmission of impulses is normal the various functions are normal and a complete system of harmony exists. But if, for any cause, undue pressure is brought to bear upon nerves, pain and disease is the result. All functions of the body depend upon and act according to the condition of nerves so that the adaptation of all parts to each other is essential for their perfect freedom.

All movements are made by the contraction of muscles. There is no power in a muscle to move itself without mental force.

Muscles, when excited to action, draw bones to which they are attached closer together; when irritated they draw with too much force so that certain forms of wryneck, hip-joint disease, and spinal curvature are the result. Instances are common where increased and continued action of the muscles about a joint have caused it to be drawn out of its proper position. Such displacements never occur except through the influence of a hindered mental impulse, making abnormal contractions.

The circulation, absorption, assimilation, elimination, repair and heat production are controlled by sets of specific mental impulses.

Sciatica, female diseases, hip-joint disease, constipation and piles are the result of subluxations in the lumbar vertebræ. Diseases of the heart, liver and stomach are produced by subluxated thoracic vertebræ which impinge nerves proceeding to those organs. Many ailments of the head and face have their origin in the displacements of the cervical vertebræ.

Whether we have a headache, too much heat (fever), constipation, dysentery or any other disease, the cause producing it must be adjusted.

Subluxations of spinal vertebræ are caused by innumerable and various accidents, as heavy lifting, falls, wrenches, train wrecks, etc.

Complete dislocation of the vertebral column accompanied with fracture, those in which the articular surfaces have lost wholly their natural connection, have long been recognized by the medical world.

While it is true that vertebræ of the spinal column are so interlocked by their articulating processes that complete luxations without fracture seldom occur, subluxations, slight displacements where the two articulating surfaces have lost only part of their natural connection, are much more common, in fact, are of daily occurrence. These are not the complete dislocations known by the medical profession, yet a knowledge of them has done more to explain the time-worn question, "What is the cause of disease?" than all doctrines advanced by medical schools from the time of Hippocrates to the present day.

These incomplete dislocations are called Chiropractic subluxations, for it was *The P. S. C.* that first recognized and brought to public notice their existence and importance in the causation of disease and worked out a system, method, art and philosophy of correcting them.

Some contortionists are able, at will, to disarticulate and replace many joints of the body, notably those of the hips, shoulders and cervical vertebræ. This is done by knowing how, and long practice.

This being true, why should it be considered impossible for vertebræ to be partly or even wholly luxated by accident, and then replaced by those who made such work a specialty?

For some time it has been known that injuries to the spine were prone to cause diseases. Many explanations of their origin have been given by eminent writers. At times their discussions have led them so close to the true nature of the injury to the spinal column and the manner in which the effect was produced that the only wonder is that some one had not long ago discovered that these troubles were caused by subluxations of articular

processes occluding the foramina, which diminished the current. Some writers have advanced far enough to describe a slight variation in the position of certain spinous processes and tenderness in the nerves at the sides of them, but in the next paragraph would utterly lose the gleam of truth and say nothing whatever could be wrong with the osseous structure; that a subluxation without a fracture was almost impossible; if such did occur, the result would be instant death, and if a patient with the above condition could survive, it would be very dangerous to life to attempt to replace the displaced vertebræ.

Vertebræ are supplied with nerves which, like all others, *originate* in the brain and pass through and out of the spine by way of intervertebral foramina and are, therefore, liable to be injured in the same way and produce diseases similar to those found in the softer parts.

Subluxations and compression cause arthritical conditions, softening and absorbing the earthly substance of the spinal cord, the nerves emanating therefrom, and a part of all of the vertebral column. Intense heat in the latter or in bones expands, softens and causes more or less of the substance which oozes out to be deposited on the surfaces of the bones called exostoses which, when coalesced, ankyloses vertebræ and other joints.

Caries produced by excessive heat, wedge-shaped cartilages and vertebræ compressed by muscular compression while they are softened by excessive heat during the M. D.'s fever, produce the various curvatures of the spine. Returning the intervertebral foramina to their former size and shape relieves pressure and restores the mind to its former personification. Results are manifested by restoration to normal conditions. In other words, the action of normal mental impulses are to restore the disfigured vertebral column to its natural shape.

Ten years ago the statement that "a displacement of two bones whose articular surfaces have lost wholly, or in part, their natural connection, is the cause of a large share of our diseases," would have been ridiculed, but now when the scientific man reads "Luxations of Vertebræ Cause Disease," if he does not accept the idea, he at least thinks that there may be something in it.

All statements not axiomatic must be proven. Unquestionably the most convincing demonstration of "Subluxations of Vertebræ Cause Disease" is furnished by being able to adjust the subluxated vertebræ. The cause of disease being removed, the patient recovers from his infirmities. In an acute case where there has not been a structural change of the vertebræ, the results may be instantaneous because pressure being removed by replacing the vertebræ normal conditions and functions are restored. In cases of long standing where the vertebræ have been changed in form by long continued undue pressure, it necessarily takes time to reform disfigured vertebræ, but this will inevitably follow when freedom of mental impulses prevail. Therefore re-

placing the subluxated parts, restoring freedom to nerves that they may convey natural action to the portions of the body that have been made abnormal by their restricted conditions is, to a Chiropractor, the only reasonable thing to do.

With knowledge of this truth established by years of experience, *The P. S. C.* has continued to make a special study of the vertebral column, discovering much that was previously unknown and developing a knowledge of how to replace displacements found therein. Among other discoveries they have found that impinged fibers, transmitting calorific mental impulses to nerves passing jointly through the same foramen, is what makes other nerves whose functions are also involved following the same subluxation, swollen or inflamed at its exit or any other distance toward the periphery, thus making it easily traced and its symptoms all along its path or at its peripheral equivalent, hence disease of that character. Many times these sheaths of tender nerves can be traced from their exit at the spine to their terminal ends by a sensitive condition following palpation.

One hundred per cent of diseases are due to pressure upon nerves as they pass through the foramina along the sides of the vertebral column. This pressure interferes with their functions, hence inflammation, unnatural action, pain and distress are manifested where these nerves end. All diseases are prolonged until pressure of those nerves leading to the affected parts are removed.

It is the business of the Chiropractor to remove this pressure with the hand, the doing of which has never been taught in medical schools, nor practiced by them. On the contrary, they state that such displacements do not occur, and if subluxations could happen, that it would be impossible for a man to replace them with his hands.

All pain is due to mental interpretation of abnormal external circumstances. All morbid action in the body is due to excess or a lack of expression or mental impulses in the motor nerve endings. An examination of the spinal column shows that each vertebra is provided with spinous and transverse processes. These are used by the Chiropractor first as one of the means of analysis, and secondly, as levers in restoring vertebræ to their normal position.

Chiropractors can relieve the larger percentage of human ailments by scientifically adjusting displacements. Even with cases abandoned by practitioners of other systems of healing favorable results follow as surely as effect follows cause.

Our philosophy of removing pressure has the most rational claim upon the affected, and when understood by the practitioner, he will no longer need to cover up ignorance of the cause of diseases by using meaningless explanations that do not explain. We cordially invite the most rigid investigation of our work, and of the principles of the Chiropractic method of adjusting the cause of disease. This science, when properly applied, will

mitigate suffering, and will adjust the cause of ailments that cannot be reached in any other way. Chiropractors are able to place their fingers on the spine and say, pointing, specifically, "There is the cause of this or that complaint."

If the reader comprehends the basic principles of Chiropractic, "take off the pressure," there will be little difficulty in understanding how utterly useless and unscientific it is to attempt to remove the cause of disease by treating effects.

This knowledge opens up a new field for investigation and research. All schools have been experimenting in the vain hope of finding a specific. Chiropractors are locating the cause within the physical sufferer instead of by unity of the one with the other. When the cause is located and adjusted, Educated and Innate Intelligence can perform their appropriate actions and establish health by a free use of the various nerves adapted to their different functions.

CHIROPRACTORS DO NOT DIAGNOSE DISEASE.

Diagnosis. (Med.) "The art or act of recognizing the presence of disease from its signs or symptoms and deciding as to its character."—*Webster*.

"That part of medicine whose object is the recognition or determination of the nature of diseases and the knowledge of the pathognomonic signs."—*Dunlison*.

Chiropractic studies causes. It is the art of adjusting them. A Chiropractor pays but little attention to symptoms, considering them only as guides showing the location of the causes. He need not waste hours, days or weeks waiting for symptoms to develop, so he may be able to recognize them in order to name intelligently the combination in its expressions and give medicines according to its name. There are no two persons who have the same set of nerves, with an equal degree of pressure, thus producing no two combinations of symptoms exactly alike. How much better it is to consider this combination of abnormal functions and put it through analysis. The term in this capacity is new, but it is the appropriate word to use when holding a Chiropractic consultation or adjusting causes. Note the appositeness of these definitions:

Analysis. "The tracing of things to their source and the resolving of knowledge into its original principles."—*Webster*.

Analyze. "To separate into constituent parts."—*Webster*.

Analysis. "Resolution of anything into its component parts."—*Dunlison*.

A Chiropractor will observe closely effects or symptoms, and will then resolve them "into original principles" that are being expressed abnormally. Each symptom, by analysis, must be traced "to its source." It is this cause that is then given careful

study, subsequent examination and adjustment "resolving it" into its original "normal principles."

Adjustment, not long ago, was a new term, yet today it is the correct word to use. From now on let us use the term "analyze" instead of "diagnose," in connection with disease.

An M. D., a D. O., or a disciple of any other therapeutical school (as all are of the same class, since they treat effects), studies symptoms, and from these diagnoses the character of the disease is determined, his treatment or prescription being given accordingly. It does not occur to him to analyze these effects by tracing them to their source.

To diagnose is to be able to decipher present symptoms, to separate, to give them relative values, and then use closer discrimination so as to name the diseases.

Prognosis is to tell the future outcome of this disease; what it may run into or terminate in. Whether grave or ultimately leaving the patient living. Vitality, age, occupation, environments are all considered just so far as these externals bear upon each or the combined condition of the disease. It is well known that the air of certain localities is bad for some diseases, some types of water are wearing upon certain systems, high altitudes making certain lung difficulties easier for one disease or harder upon another to breathe, moist or dry are better or worse for certain individuals. Morphine is a killer of pain; other drugs have equally as good or bad effects upon the disease, all of which the physician treating diseases must test, try time and again, watch the effect of each in order to see how much vitality is used in resistance and taken in consideration before giving the prognosis of the disease. He dwells upon the outcome of these symptoms. The Chiropractors analyze these effects to a cause.

Prognosis. (Med.) "The acts or art of foretelling the course and termination of a disease; also the outlook afforded by this act of judgment."—*Webster*.

Prognosis. "Judgment formed by the physician regarding the future progress and termination of any disease."—*Dunghlison*.

The practitioner that treats effects must be an expert diagnostician and prognostician; he must be proficient in "foretelling the course and termination of a disease." This is his business. He cannot give medicines nor treat with any method whatsoever, including Osteopathy, until these conditions are known. Effects must have cause. As soon as this is corrected diseases cannot exist. How can symptoms manifest themselves if the cause is corrected? Chiropractic is that science of adjusting cause. Does a Chiropractor diagnose or prognose disease? Is he not an analyst?

By adopting the word *Analyze*, Chiropractic has added to its specific nomenclature a new, distinctive and valuable term.

When a patient enters, tell him, "Yes, sir, I can give a complete analysis of your disease, from cause to effect, or from effect

to cause." Chiropractors are the only ones possessing sufficient accurate knowledge to do this.

The prognostician must guess the outcome to the best of his knowledge. A Chiropractor knows. One studies effects and the possible outcome of this treatment of them, the other knows the positive results before the adjustments begin. The comparison briefly is Diagnosis and Prognosis, scientific guesswork, the other Chiropractic Analysis — back to cause — is scientific knowledge.

DISEASE GERMS.

If it is an established fact with the learned profession, that certain diseases are caused by these infinitesimal animalculæ, why do they hesitate to inform the dear people, who are in constant fear, where these germs originate?

If it be a fact, and no more theory, anxious, suffering humanity desires to become acquainted with the subject and to learn how to avoid contagion.

Are they contained in the air we breathe? If so, why are not all afflicted alike? Do they come from the gentle zephyrs wafted on us from the northwest at the rate of forty miles an hour, when the mercury is 20 degrees below zero? Do they come in the balmy breeze of the south, or over the snow-capped hills of the far west? Do they steal into our rooms with the chilling evening draft, or are they breeding untold millions in the cozy nooks? Do they ride triumphantly on the crest of the winds, leaving, like the terrible simoon of the desert, death and destruction in their path? Are they so constituted that no amount of heat or cold affects them? Why is it that these breeders of disease flourish in the coldest weather as well as in the heat of summer?

Where is their rendezvous? Are they propagated and reared on the snow-capped peaks of the Rockies? Do they grow and flourish among the cacti on the great American desert? Are they found thriving in the Everglades of Florida or crouched among the vine-clad hills of the Alleghenies?

They must have a place of origin and the anxious uninformed would like to know where. Why should we suffer because of ignorance when there is so much known of micrology?

The scientist tells us that they are held in solution in the water we drink. Why then are not all who drink the same water afflicted alike? Why do they drink diphtheria bacilli today and typhoid germs tomorrow? Why are not all taken down with microbes at the same time? When the typhoid bacilli are pumped through the water mains, why are not all confined to their homes and business suspended? If they are in the air we breathe or the water we drink, what benefit are quarantine regulations? Should not the origin of these germs be found and means taken

for their annihilation? Is it not possible that they cannot be discovered before the disease has fastened itself upon our bodies?

If they are the cause, why cannot these great minds discover them before they create disease? Why do we not read in our morning paper that tuberculosis miliary germs are prevalent? Why are we not forewarned that diphtheria Klebs-Loeffer bacilli are in the air or water before someone has become foul? Why is it that the microscopic organisms are discovered all at once, like the maggots in a decaying carcass?

It is a fact, as claimed by the wise and learned, that those microbes in the air we breathe, which cause pleurisy, can be almost instantly killed by application of a mustard plaster; while the micrococci causing a fever can be only exterminated in twenty-one days by large doses of quinine and ice-cold packs, and then the little cannibals give up the ghost and die because of old age? Why do they last twenty-one days? Why cannot they be abolished at once, as in pleurisy? Why last for months as in rheumatism, cancers and consumption? Is it possible that after all this scientific research that these wiseacres have not yet discovered a means to eradicate them?

If cancers originate in an embryonic epithelial rudiment, or owe their growth to the multiplication of epithelial cells, as stated by those who make pretensions to wisdom, why do they not find a way to breed out instead of in, these microparasitisms?

Why do they tell us that a powerful emetic, which relaxes the whole system, will destroy the infusoria or membranous croup? How did they discover this? Was it from their own knowledge of micrococcus, or some loving mother who, in the absence of a physician, administered alum and molasses in order to save the life of her child? If a relaxation of the system will destroy the microscopic organisms of the croup, why will it not destroy other infusoria? They ought to know, and why should we not know? If we are informed, we will take every precaution to exclude the intruder; but it must be made plain or we will hesitate to obey and ask why.

If an antitoxin is a sure eradicator of Klebs-Loeffer bacilli, why cannot we have an open-mouthed vial standing on our mantel, in order to impregnate the air so that we will be sure to escape the disease? If quinine is sure death to fever germs, please tell us how much we must take daily to make our system immune and perfectly safe.

Is it necessary to apply a mustard plaster to our side each night to ward off the inflammation of the pleura? If so tell us the size of the plaster and how it must be made. Must we put in our bath certain drugs to destroy the germs of rheumatism? If so, tell us of what kind and quantity. Must we eat certain herbs that we may escape appendicitis? If so, give us the name and quantity to be used. Why not propagate cancer micro-organisms and inject the serum into all those who fear a growth

by multiplication of the epiblast, hypoblast, or acinous glands of the epithelial cells, thereby suppressing the origin of all malignant growths?

If, after all these years of research, you cannot discover these microbes before they have fastened their cruel fangs in your flesh, is it not beneficial and necessary that you give us the benefit of the knowledge gained by your investigation?

Why not issue a bulletin each day in every town and hamlet, as does the weather signal service, stating what particular diseases are to be guarded against and the means to be employed? Why not present a bill to Congress and get an appropriation for this bureau, for it is more essential than the weather signal service, which only affects our business, while these microscopic organisms affect our health, upon which depends the gaining of a livelihood and the maintenance of our loved ones?

If you do not come out boldly and tell us that you have been guessing, that you have exhausted your knowledge, that you have discovered the germs of disease until they have appeared in our systems, that you can only treat diseases and do not remove the cause, then we will cease to take your opinion as law and will look for a Chiropractor who knows where to find and how to adjust the cause.

“UNCLE HOWARD” NUTTING.

FRACTURES OF THE SPINAL COLUMN.

Stimson says fractures of the vertebræ are relatively rare, being about five per cent; they are extremely unusual in childhood and old age.

Fractures of the vertebræ are uncommon, even more so than the medical men suppose, for many subluxations are thought by them to be fractures.

Cooper says every kind of joint is not equally liable to dislocation. Experience proves that in the greater part of the vertebral column luxations are absolutely impossible.

Boyer has set down that luxation of joints with continuous surfaces are impossible.

We must remember that when an M. D. speaks of a luxation of a vertebra, that he means a complete separation of its two articular surfaces, which is usually accompanied with fracture.

Kirkland observes there are some luxations which are far worse injuries than fractures. Of this description are dislocations of the vertebræ, which can hardly happen without fracture, and are almost always fatal.

Cooper remarks, the large surfaces with which the vertebræ support each other, the number and thickness of their ligaments,

the strength of their muscles, and the vertical direction of the articular processes make dislocation of the dorsal and lumbar vertebræ impossible, unless there be immense violence, sufficient to cause fracture of the articular processes. It is certain that most of the cases mentioned by authors as dislocations of the lumbar and dorsal vertebræ have only been concussions of the spinal marrow, or fractures of such bones.

The os occipitis and first cervical vertebræ are so firmly connected by ligaments that there is no instance of their being luxated from an external cause, and were the accident to happen it would immediately prove fatal by the unavoidable compression and injury of the spinal marrow.

We find in *Gray's Anatomy* that the many joints of which the spine is composed render it liable to sprains.

Don't forget that the M. D.'s sprain is the Chiropractor's subluxation.

Gray continues: "That ligaments that unite the component parts of the vertebræ together are so strong, and these bones so interlocked by the arrangement of their articulating processes, that dislocation is very uncommon, and indeed, unless accompanied by fracture, rarely occurs except in the upper part of the neck."

Gerrish, in his anatomy, says, simple dislocation between two vertebræ is almost impossible, unless perhaps in the cervical region, where the surfaces of the articular processes are more nearly horizontal. This is borne out in practice, where we find fracture-dislocation the common injury, the process or neural arch being commonly fractured, if not the body itself.

In Vol. II of *McClellan's Regional Anatomy*, he says: "Dislocations and fractures of the spinal column are especially grave. A simple dislocation of any of the vertebræ can happen only in the cervical region, as the construction of the dorsal and lumbar vertebræ is such that a dislocation necessarily involves a fracture of some part of the bone. Even in the neck a dislocation is extremely rare. Fractures due to direct violence usually involve only the vertebral arches, the bodies escaping unhurt."

From these quotations of standard authors you will readily see that the medical profession do not recognize subluxations of any one of the 52 articulations of the spinal column. They think that such can only occur as a result of fracture; then they refer to a complete luxation and not to a Chiropractic subluxation.

The bodies may be fractured obliquely, transversely or longitudinally; it may be simple, comminuted or impacted. The injury may concern one or more vertebræ. The body may be crushed, driving a portion of it into the spinal cord. The differential diagnosis of fracture and displacements must usually remain in doubt, for they each present similar symptoms, there being no crepitus to decide.

The prominent sign of spinal fracture is traumatic kyphosis, a displacement with a wounded and abnormal mobility of the fragments.

Herrick says it is impossible for any twist, or shakeup, to have sufficient force to fracture any of the vertebræ or their processes, yet direct violence of a blow on the back or falling across some projection, may cause it.

Beck thinks that fracture of the spinous and transverse processes are extremely rare.

Helperich speaks of fractures of the vertebral bodies being extremely rare, that of the laminæ with spinous and transverse processes not common.

Beck says that fractures of the transverse processes are still rarer than those of the spinous processes, and their recognition is extremely difficult on account of the thick muscular layer protecting them.

From an examination of *The P. S. C.* large collection of vertebræ, we find the healed fractures of the spinous and transverse processes to be quite frequent and about twice the number of the latter as of the former.

Stimson is of the opinion that fractures of one or more of the vertebral processes, either of the same or the adjoining vertebræ, are common.

Howe says that the breaking of the tip end of a spinous or transverse process is not serious. With which I fully agree, because such a fracture does not change the shape nor the size of the foramina through which the nerves pass where they are liable to be impinged.

Cooper informs us that a fracture of the upper cervical or of the odontoid process is always suddenly fatal.

Gould and *Pyle* observe that injuries of the cervical vertebræ, while extremely grave, and declared by some authors to be inevitably fatal, are, however, not always followed by death or permanently bad results. Fracture of the lower part of the spine is not always fatal, and notwithstanding the lay-idea that a broken back means certain death, patients with well authenticated cases of vertebral fracture have recovered.

Stimson thinks that the fifth and sixth cervical, the last dorsal and the first lumbar are more frequently broken than any of the others.

The fragments of a fractured vertebra should be repositioned as near as possible. This will of necessity need careful work and a thorough knowledge of the anatomical construction of the vertebral column. The nurse will need to be very careful in changing the patient's position, so that the fragments will not be disturbed until they are thoroughly secured by being healed. Owing to the cancellous condition of the bodies of the vertebræ three months may be necessary for consolidation of the fracture. While there is a fracture of the processes only; mobilization may not be necessary.

In youth the epiphyses of the spinous processes are liable to become separated and absorbed, causing them to appear shortened, giving the impression to the uninformed that of an anterior subluxation. An examination of the transverse processes will show that they are in line, therefore the processes are not displaced.

The diameter of the spinal cord and spinal nerves are considerably less than that of the canal and foramina in which they are located. The spinal cord ends at the first or second lumbar vertebræ, but the cauda equina of nerves continues to distribute the nerve fibres, so that partial occlusion of the vertebral canal or foramina does not of necessity cause death.

Gould and *Pyle* state that injuries to the spinal cord do not necessarily cause immediate death.

Mills and *O'Hara* record instances of recovery after penetrating wounds of the spinal marrow.

There is a vast difference in impaction of the bodies of the vertebræ which only occur when the bones are in a normal condition, and that of compression when the softened bones have been compressed against each other, changing the shape of the intervertebral cartilage as well as that of the softened waxy bodies, forcing a portion out on one or more sides or posterior in the spinal canal.

Fractures may be the primary cause of softening a part of all of one or more vertebræ by impinging the nerves, thereby creating an excessive heat as they pass out of the occluded foramina.

The importance of fractures of the vertebræ to a Chiropractor depends upon the associated injury, that is very liable to occur by the occlusion of the spinal canal of its foramina.

Where changes in the size and shape of the vertebral canal or its foramina are caused by fracture or displacements, the results are the same, either of which is very likely to impinge the cord or the nerves emerging therefrom.

If the vertebra is deformed by impacted fracture, there will be kyphosis or scoliosis.

THE BODY IS HEAT BY MENTAL IMPULSE.

It will be of interest to learn how the body is heated by *mental impulses* which creates combustion of chemical arterially and serously deposited and not by blood and, therefore, the blood acts as one of the attributes in preference to performing all the calorific duties thereof.

The patient upon whom the first tests were made (July 1, 1903), A. R. Renwick's left hand, arm, shoulder and on up to the spine, was intensely hot. Dr. Palmer drew the attention of

the class to the excessive heat condition of the portion named; the balance being normal in temperature. He then gave an adjustment in the dorsal region, which relieved the pinched nerve on the left side, also the excessive heat of the left upper limb; but he had thrown the vertebra too far, which had the effect of pinching the nerves on the right side and immediately causing the upper limb to be excessively hot. He asked the class, "Is the body heated by blood or by mental impulse?" He left them for two or three minutes. He returned and asked, "Is the body heated by blood or by mental impulses?" The class unanimously answered, "Mental impulses." Thus was this new thought originated.

"Dr. Head, London, England, recently had the sensory nerves of one of his arms divided and studied the sensations. Then he had the nerves united by stitching and studied the process of recovery. The result was that he discovered two distinct sets of sensory nerves, one that conveys the sensations of pain, heat and cold, and the other sensation of touch.

"The discovery also makes possible the accurate localization of the sensations. The healing power of the skin is found to depend entirely upon the set of nerves that convey impressions of pain, heat and cold."

The above quotation corroborates one of the underlying principles of Chiropractic, viz.: the temperature of all animated bodies, whether human or animal, is maintained by calorific and frigorific mental impulses. This discovery was made, as above stated, seven years ago, without severing nerves.

Chiropractic stands head and shoulders above all therapeutical methods.

NATURAL BONE-SETTERS.

A. J. Howe, A. M., M. D., in his valuable *Treatise on Fractures and Dislocations*, on page 256, says of these Bone-Setters:

"A few individuals have the credit of being bone-setters, but their merits, so far as they go, depend more upon tact than skill; and the prevailing credulity of the people has given them more reputation for ability than might reasonably be expected from their limited success.

"A family by name of Whitworth, in England, and another by name of Sweet, in Connecticut, have assumed to possess these wonderful inborn qualities. For two or three generations, one or more of the male members of these families claimed to possess a secret power of reducing dislocated bones; and not a few persons of average intelligence give credit to these preposterous assumptions. Any uneducated man with a large endowment of boldness and self-assurance, claiming to be a natural bone-setter, could, by giving every distorted joint coming in his way a severe

pulling and twisting, accomplish some cures; the successes would be heralded far and near, and the failures would pass unmentioned and unremembered; consequently he would soon gain considerable experience in handling defective joints, and if he proved to be a good learner he would acquire considerable skill in his pretended art. Having received no lessons in anatomy and surgery, success even in a single case would be accepted by the popular mind as positive evidence of the Innate power. Love of the marvelous is so infatuating that every age will have to endure its quota of imposters. However, it is not to be denied that these charlatans have done some good indirectly. The fact that a dislocated bone could be reduced by manipulation without the aid of pulleys and other instruments for multiplying force, led such discreet surgeons as Dr. Nathan Smith to put the manipulating plan into successful practice.

The Whitworths, Sweets and others of their order, studiously keep to themselves the plan of operation, though competent observers declare that it is not essentially different from the plan now followed by the most intelligent portion of the profession. Being aware of their general incompetency in surgical science, these natural bone-setters preferred to keep secret the little knowledge they possessed, hoping to retain this meager advantage over those who in other respects were their superiors. Probably a similar feeling actuated the Chamberlins to keep as a secret in their family a knowledge of the obstetric forcep. Such detestable selfishness, by a law unvarying as that of gravitation, will taint the name of those who in any branch of the healing art withhold knowledge which accident or genius has placed within their power. Anything in medicine or surgery which will benefit our fellowmen ought to be the common property of mankind; and he possesses a sordid viewpoint who, from selfish motives, will not promulgate a secret which will ameliorate the condition of the unfortunate. The dabbler in secrets is, by the common consent of all good men, branded indelibly with the disgrace that cleaves to the quack and charlatan.

"It seems a pity that somebody before Dr. Nathan Smith's time did not take a hint from the Whitworths or Sweets, and study out and put in practice a principle of reduction in dislocations which was demonstrated by those charlatans to have an existence. Perhaps the spirit of the profession was too arrogant to receive suggestions from such a source. Unfortunately for the world, good ideas are too often kept from seeing light on account of the illiberality of the influential classes."

Howe is the only author who makes mention of the "bone-setters," and reluctantly admits that Dr. Nathan Smith was the first medical man to take the cue from the bone-setters and adapt hand manipulations to set displaced joints. In time the Chiropractors will be given a similar credit for ability and ignorance.

The Sweet bone-setters live at Sag Harbor, a small town situated at the east end of Long Island, New York. The old doctor has been dead for several years, but his children, Steven, Charles and Mary, still follow the business of bone-setting. Many amusing stories are told about the old doctor. He was asked by a physician where and how he got the knack of setting bones. He said: "Don't know, just came to me all of a sudden one day when I had caught a chicken and was about to kill it. But first I began fiddling with it, and first thing I knew I'd pulled a bone out of place. In putting it back I pulled another out of place, and I pulled another out of place in putting it back. Then when I'd got 'em all back in place I got an idea I'd learn how to set bones and give up farming. So I practiced uncoupling and coupling up the bones of my dog until I learned the right twists for setting all the different bones. Guess I took that dog apart nigh unto a hundred times, on and off. He got so used to it that he seemed to enjoy it, and I do believe he missed the exercise when I let up on him."

Sweet always refused to explain to anyone except his family, the peculiar twists that were required to set bones. The old doctor has migrated to a country where there are no bones to set, but his family continue the business with such dexterity and rapidity that physicians can not get the Sweet twists.

A New York drummer, while at Sag Harbor, heard of the bone-setter and said: "Bet he's a fraud, and I'll prove it, too, if you fellows will bind up my shoulder so it will look as if it's broken and then call Sweet."

The shoulder was wrapped and Sweet was summoned. When the doctor arrived the New Yorker was groaning as if suffering intensely. Sweet examined the shoulder, smiled, and told him to raise his arm. The drummer could not raise his arm, and insisted that the shoulder was out of joint.

"You bet it is, stranger," said Sweet, "and they'll not get it back into place until you and your friends have paid me \$25 for putting 'em back." The amount was finally raised; then Sweet gave the man's arm a jerk or two which placed it in its socket. This reminds me of two incidents, one which was played on me as a joke, or to find out what there was of adjustment, or to expose my business.

A certain physician, with an assumed name, called with his wife. He claimed to have neuralgia in his left shoulder, and paid me the regular fee of \$10. I failed to find any cause. He then told me who he was, and that he had no neuralgia, and wanted his money back. He threatened in vain. I kept the money and he had the experience.

Rev. McCurdy, a former Methodist minister of this city, had hemorrhage of the lungs, for which he took adjustments until he was well. One day he brought Rev. Smith, who did not believe that displaced vertebræ would cause disease. So I asked him if he ever had rheumatism. He replied in the nega-

tive. I offered to give an adjustment in order to show him that vertebræ could be displaced, and that such would make disease. He accepted the offer and I displaced a lumbar vertebra so as to produce sciatica. About two hours after he returned and said, "Rev. McCurdy says if you can make rheumatism, you can also remove it." His rheumatism and skepticism was removed by replacing the vertebra.

A Fifth avenue millionaire's mother, in her seventieth year, dislocated her hip by a fall. The best physicians of New York failed to replace the head of the femur. The man of wealth had heard of Steven Sweet and his bone-setting while out hunting in the vicinity of Sag Harbor. So he sent for him.

A day later the door-bell of the mansion rang. The butler opened it and saw a large man with a clean, flowing white beard and clothes that were well patched. The butler asked, "Are you—ah—Mr. Sweet?" "I'm Sweet, the bone-setter," was the answer. The butler had expected to see a different looking man and hesitated about letting him in. Sweet became indignant and said, "I don't come here to be kept waiting on the door step, and what is more, I don't give a d— for the case."

The bone-setter started to return home. The butler told the millionaire of the tramp who said he was Sweet, the bone-setter. He was soon overtaken and the mistake corrected. Gently he handled the displaced limb; suddenly before onlookers knew what was being done, he gave a twist, and with a snap the bone was put in place. "Now," said Sweet, as he turned to go away, "I'm no blundering doctor, thank the Lord; I'm just a bone-setter."

Fifteen minutes later Sweet left the house with a \$3,000 check in his pocket. He had asked for \$50.

I presume Sweet's bone-setting was done by knack and not strength. The doctors watched him setting bones, but could not catch onto the "secret."

MORE KNOWLEDGE ABOUT THE "SWEET BONE-SETTERS."

Newark, N. J., Oct. 18, 1905.

B. J. Palmer, D. C.

Dear Sir: In writing of Chiropractic in *The History of Medicine* (Maine Farmer Publishing Company, Augusta, Maine), I aimed, with limited space and information at hand, to tell the truth candidly, with good will at heart. Whether I defined "Chiropractic" accurately is a matter which speaks for itself. I am far from being beyond making mistakes, but I do not do so intentionally. I did not consult a lexicon, but rendered the term as we commonly do, with what it signifies, hand practice. But Lidell and Scott, I observe, define pratikos to denote practical,

effective, etc., which will justify your criticism. It would, however, have suited my martinet temper better if the science had been named Chiropraxis as being more in conformity with the Greek, and then the term Chiropractic would have been the proper adjective. But you are no worse than others.

But before I attempt to pass judgment upon your procedures, I would like to see an example. I have my prejudice to surmount, although the notion of referring all complaints back to the spinal nerves hardly seems to me supported by facts. I have been in the habit of regarding the ganglionic or sympathetic system as more truly a center of disturbance. If, however, you make cures, that is the main thing to be considered.

You may be assured, however, that I concur heartily with your views on medical legislation and vaccination. Both are outrageous and should be denounced by every intelligent, conscientious man.

To impregnate a person with disease matter, whatever the law or profit, is crime and a cruelty, as well as absolutely irrational. If anything justifies widest resistance, it is compulsory vaccination.

A few days ago a physician, a friend of mine, was conversing with an orator in Providence, R. I., and took the occasion to speak plainly of the "facts" and humbugging utterances, now so common with the profession. "Do you say this publicly?" the other asked. "I do," he replied. "But," pleaded the other, "we want business."

There is the secret of the obstinate persistence in regard to vaccination. A large part of the profession are conscious of the utter uselessness of vaccination; but they "want business."

As for the medical statutes, those which we now have, bad as they are, they constitute only a beginning of what is contemplated. The "elevating of the standard" of instruction has little to do with any endeavor to have able and better practitioners, but only to make the study so expensive that only a few will undertake it. One of the exploiters of the policy set it forth thus, ten thousand students would be in the medical colleges and two thousand of these would graduate each year, which would supply the number of new doctors required.

This facilitated a national board of examiners which was to take the place of the present state boards, and the license would be universal.

The result thus aimed at was not only to have the parent school supreme, but also that henceforth physicians would be gentlemen.

All Homeopathists, Eclectic, or what not, who foster and support medical laws, are thus helping drive nails in the coffin of the respective schools and to destroy their own brethren.

Mr. Lincoln's Gettysburg speech can thus be paradoxical, by a government of the people, by the doctors, for the doctors.

What then for the acknowledgment so often made by learned men or their workers who prowl like jackals around legislatures that, on the whole, the medical profession is the source of more injury than benefit to human beings.

In the paper which you recently published in relation to the "Natural Bone-Setters," the Sweets, you repeated things that were not correct. Their origin was misstated and their methods hardly received justice. I care nothing for the authority to which you applied. I know something of what I am saying.

An ancestor of the Sweets had an office in the British army and taught his art to his children. They made their home first at Kingston, R. I. They were all carefully instructed in their art, but it seems to have been a rule with them that only one should engage in the business in the same town.

It may be that some of them were tricky and charlatans, but as a general fact, they were simply country folk, hardly as wary and worldly wise as others. They were herbalists as well as bone-setters and procured their own simple remedies in the woods and fields.

One of them lived and died in Newark. He was plain in manner, unpretentious, but diligent in his pursuit. When in the office he stayed behind the counter with his coat off and sleeves rolled up. His tact and perception, however, seemed almost superhuman, and his probity could not be questioned.

Dr. Job Sweet represented the family at Kingston in the time of the Revolution when the French troops under Rochambeau were stationed at Newport. His services were employed with them as a surgeon. The daughter of Aaron Burr, while yet a young girl, had the misfortune to dislocate her hip. Col. Burr sent for Sweet to come to New York and replace the limb. He came by ship, but was with difficulty persuaded to enter Burr's carriage at the pier, lest there was some contagion. Coming to the house of Richmond Hall, now Varick street, he greeted his patient and then applied a salve or ointment to the region of the injury. After some hours, as he was about to go to bed, he asked to see her again. In a moment he had replaced the bone, then calling for a staff, he made her walk. Next day many people and a score of physicians came to see the operation, but Sweet had returned to the ship and was on his way home to his blacksmith shop.

Perhaps I am visionary. I do believe in a world beyond the present one and in a power of perceiving what is not commonly known. There is somewhat of the mystic in my mental composition. I think that members of the Sweet family were "gifted." They were not educated in books any more than their neighbors, and did not make vain pretendings. Old Job Sweet once visited Boston and a physician took him to the anatomical museum. Passing by a mounted skeleton he stopped and called

attention to it. "I never saw a toniny before," said he, "but that bone in the foot is wrong side up." This was disputed, but he changed its position, knowing that he was correct. The late Thomas A. Hazard stated in his History of the Hazard Family, and his veracity and intelligence are beyond question:

A son of Job Sweet was operating upon a patient with a broken thigh. A bystander, who knew him to be uneducated, asked him how he was able to replace the bones so exactly. He replied he could not tell, but that he was as certain of the position of the bones when he was operating as though he saw them with the naked eye.

A grandson, equally gifted, made the following statement: "I see the bone that I am going to set just as plainly as if it had no flesh upon it."

Mr. Joseph P. Hazard, of Peona Dale, R. I., having, in some athletic exercise, displaced the semilunar cartilage in one of his legs, applied to various surgeons, Dr. Hazard among the rest. They told him that to restore it was beyond the surgical art, he must carry his leg bent up all his life. He visited John Sweet, a farmer at work in the hay field, and secured his promise to give him his attention. At nightfall he came, well braced by a strong dram of liquor, as though nerving himself for a stubborn task. It need not be told that he hurt his patient mercilessly. But the crooked leg was made straight. Sweet gave him a few directions and went away.

Some days later Mr. Hazard visited to pay him for the operation. "I have to do a good deal for nothing," said he, "and I must charge you pretty high." The bill was two dollars. Such were the Sweets of Rhode Island.

In 1843, William Lloyd Garrison, the father of the anti-slavery movement and editor of *The Liberator*, in Boston, spent the summer at the home of the Fournier Association at Northampton. Mrs. Garrison met with an accident, injuring her foot. After an unsatisfactory consultation with several surgeons, they repaired to Hartford, where one of the Sweets lived. He speedily adjusted the bones of the injured foot as if by magic. Mr. Garrison was enthusiastic in praising his ability.

Some years ago, it is said, a Dr. Reid, of Rochester, N. Y., obtained knowledge of the Sweet procedure and announced it to "the profession" as his own discovery. I have heard the late Dr. Morton Robinson, of Newark, describe it. He was a fellow townsman of the Sweets in Rhode Island himself, a descendant of the Hazard family, and for years a partner of Dr. Jonathan Sweet in Newark. His explanation was very simple. It was by first relaxing the tension of muscles that were involved and then replacing the bone where it belonged, following the same route which it had taken when fractured or dislocated. In this way there would be little injury, and the torments to which patients had formerly been subjected would be obviated.

I have told a long story, longer, perhaps, than you have patience to read. It is at your service, in whole or in part, for publication or the waste basket. But it is true to the dead, as well as the living.

ALEXANDER WILDER, M. D.

SO NEAR AND YET SO FAR.

Many abnormal physical "phenomena" are met with in daily practice. They are considered "phenomena" because the *etiology*, how and why, are not known. Could the practitioner have a comprehensive knowledge of the source of power, its manner and how expressed to produce the normal manifestations of life, then the abnormal would be the interference. Without knowledge of both, the intervening steps can never be understood.

It is interesting to a Chiropractor to read medical works, to see how they continue to stumble over in their endeavors to find the real cause. They insist in looking for the cause of ailments, symptoms, disease, outside of the body. If the same degree of diligence was given in searching *within* the body, success would have been obtained long ago.

McClelland's Regional Anatomy, 1892, shows the nearest approach to the Chiropractic cause of disease of any medical work to my knowledge. *The P. S. C.* has made comparison an important study, having for that purpose a most complete library.

It is almost needless to say that that author was so far from agreeing with the medical order of things of the present date that his work is now out of print. He gave too much attention to nerves and the corresponding peripheral actions, and not enough to the blood.

"Owing to the complicated relations of the nerves to the various vertebræ, the accurate interpretation of symptoms which may attend injury or disease of the cord or spine is very difficult." It is "very difficult," for he cannot bridge the gap between normal and why abnormal, that which Chiropractic supplies.

In referring to "The minute anatomy of the spinal nerves," he says: "They are supposed to preside over the sensations of temperature." He here gives to "nerves" the power of controlling the heat of the body. This sentence should read: "Spinal nerves conduct mental calorific impulses through specific fibers for that purpose. Innate presides over the degree of expression." In speaking of another set, he remarks: "These fibers are supposed to preside over tactile sensations." He refers to still another as "To these is attributed the conduction of the sensation of pain." This should read: "To these is attributed the conduction of the impressions which are mentally interpreted as pain."

"Both the anterior and posterior divisions of the spinal nerves possess fibres which are called trophic, because they are supposed to regulate the nourishment of the various tissues. The

anterior divisions contain trophic fibers, derived from the cells, in the gray matter of the anterior cornua, (the intelligence of) which regulate the nutrition of the muscles and bones." The regular theory of the M. D. and D. O. gives to blood absolute control of the above functions. This man was, no doubt, ostracized for daring to think.

In some of the above names and functions, as given by McClelland, we heartily agree. But the Chiropractor can demonstrate the existence, and goes further, and gives to mental impulses the control of all functions of the body.

"So near and yet so far." Bordering upon the real manner in which the body controls itself, and then stopping for fear the gulf, into which he had looked, would broaden and take him in.

In this respect McClelland, M. D., is ahead of medical and Osteopathic professions. They are still fighting with the weapons of bad, congested or strangulated blood, to conquer, compel and make disease leave the body. They give to the blood the power of supplying and controlling nutritive substances. In this chapter, *The Region of the Back*, he does not refer to blood; the word is not mentioned. I would like to see the book on Osteopathy that does not refer to some type of blood in every disease and the treatment that is given being to increase or decrease this flow.

Dr. McC. published these thoughts in 1892, three years before Chiropractic was born; yet he lightly fingers nerves that "preside over the sensations of temperature."

Dr. McC. would have us understand that the same nerves that give heat sense it. Efferent nerves convey impulses outward from the brain, the quantity and quality of which regulates that condition known as heat. The duty of the efferent nerves is to receive the corresponding vibrations by making an impression upon the brain, where it is interpreted to a normal or abnormal degree of heat. Two sets of mental impulses are necessary to "preside over the sensations of temperature" instead of one.

"Division or complete disorganization of the spinal cord is attended with complete loss of sensibility and motion below the point of injury, showing that the cord is the organ of communication between the brain and the external organs of sensation and of voluntary motion."

Chiropractic teaches that every peripheral nerve has direct connection with its proper lobe in one of the two brains. Why could not Dr. McC. have gone further and given credit to the loss of other functions to the same pressure upon nerves? In the above "injury" there might have been a lack of heat, anemia, inability to repair fractures, lack of secretion or excretion, etc., etc. Why not give to the same cause the credit of these also?

There are no relay stations in the spinal cord; those manifestations that are known as normal or abnormal "physical phenomena," called "reflex," are the direct results of action, by In-

nate Intelligence, upon those impressions, as received by it, from the external by afferent nerves; after which she sends forth responsive impulses. Impression is received, impulse is the response. Instead of being "reflex," they are responsive. Where does the present knowledge, as taught by medical and osteopathic schools, of "reflex" actions convey any intelligence? Has the spinal cord a soul? Is life controlled by the spinal cord? The Chiropractor wishes to find an intelligent, masterful mind that controls such complete pieces of work. "Reflex" does not meet his comprehension. This deficiency has been completely supplied by the Chiropractic knowledge of Innate Intelligence.

Chiropractors prove that all involuntary functions are originally controlled by impulses sent forth from this Innate mind, each function having direct connection with its lobe for that purpose. This includes the nutrition and other functions which are performed within the brain, the nerves of which originate in their respective lobes, pass through the spinal cord, leave a foramen, thence to the tissue involved. This is true of what is medically and osteopathically known as the "twelve cranial nerves."

"When the brain does exercise a controlling influence, the impression received by the posterior root *probably* crosses to the opposite side of the cord at once and then ascends to some part of the cerebral cortex, whence a voluntary motor impulse descends to the anterior nerve-roots, which convey it to the muscles."

Certain truths have evidently been thrust upon Dr. McC., as in the above. He admits a Chiropractic ray of light, but has as quickly shut it off, for fear it will hurt his clear vision. Not being entirely out of the dark, he hurriedly shuts the door and returns to the old following instance:

"There are certain actions, termed reflex, which can be accounted for only upon *the supposition* that the spinal cord possesses *in itself* the power of receiving and conveying impressions independently of its connection with the brain."

In the following quotations, which is the end of the paragraph, we find the first gleam of Chiropractic truth, which, in itself, contradicts the second. It can readily be seen that he is treading on ground which is not comprehensive; yet, dismiss it he cannot.

His reason for supposing that the spinal cord possesses independent power is contained in the following quotations: "Thus, during sleep, when the (Educated) brain is not exercising a controlling influence, if an (Innate) sensory impulse is conveyed through the spinal nerve, it probably passes by the posterior root into the gray matter of the cord, and then the impulse is converted into a motor one, which is reflected by the anterior root of the spinal nerve, causing certain muscles to contract upon the same side." Words in parenthesis I have supplied. Dr. McC. comprehends how a voluntary impression reaches the mind, but he cannot see how impressions made during sleep can reach and be acted upon by the mind that is asleep. He has here lost his connecting thread.

Each individual has two minds, the voluntary Educated and the voluntary Innate. Innate never sleeps; it is thon who is awake night and day. It is this person that causes these impressions to be received and acted upon through a set of voluntary nerves, those over which we have no control.

If we could comprehend that all peripheral voluntary nerves reach their individual brain, and from that point the Educated voluntary and Innate voluntary impulses are sent out by day and Innate voluntary alone by night, then he would see the uselessness of the spinal cord "reflex," "reflected" system.

The source of "involuntary" power is credited to the spinal cord by medical and osteopathic authorities. Chiropractors have proven that the headquarters of Educated voluntary and Innate voluntary power is in the brain. The media through which the act is performed determine whether it is under the control of the Innate or Educated mind.

This power, regardless of whether voluntary, cannot be stimulated or inhibited. The impulse after reaching the periphery can be temporarily increased or decreased, but the energy direct cannot be reached by medicines, machines, osteopathic treatments or Chiropractic adjustments. The underlying principle in all therapeutical methods (Chiropractic is not in this class) is to use external means, of thousands of characters, to stimulate or inhibit the blood, thinking thus to reduce the expressions of disease. From whence comes this power they think little and reason less.

Chiropractors consider all manifestations from the base of control. We do not aim to increase or decrease the quantity of impulses but to release pressures upon nerves so that the proper quantity of impulses which were upheld are now free to continue upon their regular path to do normal duty. Diseases represent the inability of impulse to reach the peripheral nerve endings to perform their functions.

One of the main points to be considered by a Chiropractor is not how bad the disease is, nor how far along it has progressed. Many a serious case, according to effects, will get well in a short space of time. Other mild cases will need a lengthy series of adjustments. The length of time necessarily depends upon the amount of reserve power that can be called upon and utilized after the obstruction to the expression of its impulses has been adjusted. This reserve power differs in every two persons; thus, one person cannot be compared with another.

To consider the advisability of the outcome from a study of effects is as foolish as to try to cure diseases by treating them. The quantity of vitality in reserve, which can be used, must be weighed. It is from this point that the rejuvenating process will come forth, from the brain by means of mental impulses. Whether they get well shortly, depends upon how quickly you, as a Chiropractor, succeed in taking off the pressure by adjusting that subluxation so that mental impulses can do their normal duty.

"A simple dislocation of any of the vertebræ can happen only in the cervical region, as the construction of the dorsal and lumbar vertebræ is such that a dislocation necessarily involves a fracture of some part of the bone. Even in the neck a dislocation is extremely rare, and when it occurs, it is usually at the fifth cervical vertebra, which can be accounted for by the degree of movement of this portion of the column."

"Dislocation," as taught and accepted by the medical and osteopathic schools, must necessarily involve a fracture of parts. To have a dislocation is to completely separate the articulating surfaces, one vertebra completely parted from its mate. Osteopaths do not know the existence of a Chiropractic subluxation any more than do M. D.'s. Many D. O.'s are attending *The P. S. C.* and learning how to adjust them.

A Chiropractic subluxation is a partial dislocation, slightly separated from its articulating surfaces. This condition does not necessarily involve a fracture. The subluxation partially occludes the intervertebral foramen; the dislocation completely. It is the subluxation that produces pressures upon nerves as they emanate through these openings, hence, impulses are hindered, disease its result. This form of subluxation is, as yet, given little credence by the medical profession. Since 1895, osteopathy has been purloining this idea, even to the extent of copying paragraphs of especially phrased material of *The P. S. C.*, writing articles about them as the cause of disease. And yet, the same paragraph will tell how anemia is caused by bad, diseased blood. A slight comprehension of that which they are trying to make a leader proves the incompetency to grasp its import in practice.

Chiropractic subluxations are known in medical parlance as "sprains," the result of which, according to M. D.'s, are unlimited. A Chiropractor quickly realizes that the effects following a "sprain" are the results of pressures upon nerves as they leave the intervertebral foramina.

Dr. McClelland admits the fundamental truth of Chiropractic—pinched nerves at the intervertebral foramina hinder mental currents. He maintains, though, that "Caries" is the cause and it produces many "characteristic symptoms." He does not attempt to state what causes the caries. This is a disease and must have a cause. What and where is it?

"In different forms of caries which affect the bodies of the vertebræ, although the spinal cord usually accommodates itself to the progressive pressure, there are certain characteristic symptoms due to the pressure upon the spinal nerves."

We must infer that he directly refers to "pressure upon the spinal nerves" as they emanate through the intervertebral foramina. The cord is not susceptible to pressure, within the spinal canal, as "the spinal cord accommodates itself to the progressive pressure."

"The peripheral pains thus produced can be interrupted by a knowledge of the areas of the distribution of the several spinal nerves.

"When any of the upper three vertebræ in the cervical region are diseased, pain is often complained of in the areas supplied by the occipital and great auricular nerves.

"If the fourth and fifth cervical vertebræ are diseased, pain may be referred to the distribution of the sternal, clavicular and acromial nerves.

"If the sixth and seventh cervical vertebræ and the first dorsal vertebra are diseased, pain may be referred to the shoulder and down the arm in the course of the branches of the brachial plexus of nerves.

"When any of the upper six vertebræ of the dorsal or thoracic region are diseased, pain is felt in the course of the corresponding intercostal nerves, and if any of the lower six vertebræ are affected, pain may be referred to the epigastric, umbilical, or hypogastric region, in the areas supplied by the seventh, eighth, ninth, tenth and eleventh intercostal nerves.

"In the lumbar region the nerves liable to pressure are the branches of the lumbar plexus, notably the ilio-hypogastric, ilio-inguinal, genito-crural, and anterior crural nerves, and pain is sometimes referred to the course of the internal saphenous nerve as far as the ball of the great toe, which can be attributed to spinal origin rather than to the gout. The pains experienced in spinal disease are always accompanied by a peculiar constricting sensation, as if a tight band were clasped about the body in the seat of the affected nerves, and hence they are often denominated girdle pains."

It will be noticed that the author has confined himself to "pains" produced by these pressures. Could he have carried the subject deeper and expressed himself to mean all functions, as heat, nutrition, excretion, etc., he would have been a Chiropractor; providing he could adjust and rectify the "caries," which would have to be done, not by orthopedical surgery in its hundreds of devices and appliances, but by hand adjustment, to correct that which is *the* cause—the lack of current induced by the vertebral subluxations.

The medical profession have, for thousands of years, considered the treatment of ailments of the body. They have studied the body surgically, medicinally, dissectionally and osteopathically with that object in view. The results of these observations are that they have evolved a nervous system founded and based upon that rock.

Chiropractic is the product of study from cause to effect. It locates causes, within the body, then adjusts them; therefore, that which is considered to be the nervous system by M. D.'s could not be utilized by a Chiropractor, as it is fundamentally wrong; hence, a new nervous system, one which will stand the

most rigid investigation, entirely different and not to be compared with any precedent.

Facts as proven on the living, feeling body by tracing the affected nerves, from subluxation to its peripheral, has made the following necessary. It proved the non-existence of many supposed nerves. The location, according to sensibility, showed the wrongly placed location of many nerves according to function. The further development of Chiropractic has to follow its foundation; hence, the nervous system, according to Chiropractic, was inevitable. This new system of nerves, their location, origination, etc., was the outgrowth of that unique study, Nerve Tracing, distinctly a *P. S. C.* production, and thus supplanting it with a true, practical, rigidly tried system.

To the uninitiated this sounds impossible. "Haven't they found and traced by dissection?" True, but what evidence can you base upon the fact that a swollen nerve, after death, was the one involved? To trace that nerve during life is an exact science, for it demonstrates its true existence, origination, location, function, path and depositing point. To demonstrate that a particular nerve was producing a certain disease meant that the Chiropractor will find the subluxation and from that point trace to the affected point, or vice versa. It is scientific demonstration upon the living body as compared to dissection upon the dead person. Facts vs. Theories. Demonstration vs. "Suppositions."

A SPINE-SET PERSONIFIED.

I was born into this state of existence, not of necessity, but as a makeshift. I am a believer in transmigration, for I have lived in several entities. Many years ago I was an acorn. In time I became a large tree, and was useful in many ways; but a woodman's axe laid me low. He severed my limbs from my body. Two men with a saw cut me in lengths of three and a half feet. We were hauled to a mill a mile away. I say we, for as often as the original was divided each piece became an individual.

The log that I was a part of was divided into pieces nearly an inch thick each way. I was then run through a machine that made me awful dizzy. When I came to I was round, instead of square, and tapered from one end on which they had left a part of the original flat surfaces. We were tied in bundles and piled in a large shed, where we had a season of rest. In time we were made into broom handles. My experience there and the different rooms we passed through is interesting, but I will not tire you by relating all I have seen and heard. Each time I changed hands my value increased. At last I was selected by a farmer's wife, who took me to her home.

I was placed in a corner of the kitchen. To my surprise, she stood me on my head and watched me as though she feared I

would get away. I overheard her say to a neighbor, "A new broom sweeps clean." The woman replied, "The old one found the corners."

There came a fall of snow, preceded by rain. Ma (that was what the family called her) took me to sweep the snow from off the doorstep. While doing so, she fell on me and broke me nearly in two. I did not say a word, but she screamed for Pa. He carried us into the house, laid her on the lounge and stood me in my corner. They saw where I was crippled, but did not know why she kept saying, "Oh, my back!"

The next morning the family doctor came and looked Ma all over, and said, "It was lucky that no ribs were broken." He, nor I, knew the cause of her distress, but today I could tell him. He left her some quieting powders. She had a nurse, while I had a string wound around my body, was compelled to do my usual work and to stand in the corner, where I could see and hear all.

One day a Chiro doctor came to our house. He looked at Ma's back, and said that when she fell on the doorstep she displaced one of the vertebræ of the back. He showed us a string of bones that he said were like those in her back. He told us which one was pushed out of place. He said he could fix it with a stick and mallet; he had done so with thousands, just like hers. Pa was egotistical, and quick to catch onto anything which was new. I saw him look very closely at the bones, mallet and stick. He was an observer; he sees everything; what he can't learn to do ain't worth doing. He asked the Chiro doctor what he charged to teach it, and how long it would take to learn the business. Pa was tired of farm work and eagerly embraced this opportunity of becoming a doctor, living in town and fixing people's backs.

The next day Pa took me to the woodshed and sawed me into three pieces, my portion being five and a half inches long. Previous to this I had always received good work. But such a job of sawing! I never saw a saw saw as that saw sawed. He blamed me for the poor work, because I rolled. His rough saw gashes are on my body yet. I had my opinion of what kind of a "Saw-bones" he would make.

He took me to town and fitted me with a rubber cap, which had been made for the lowed end of a crutch. At the five-cent store he bought a two-inch solid rubber ball, and a wooden mallet at the hardware store.

He again took me to the woodshed. With a saw and a dull knife he cut a notch near one end of my body. He made a hole, a half inch deep, in the rubber ball, making the bottom much larger than the entrance. He now worked my foot into the rubber boot, for such it proved to be. He placed my foot on a piece of wood and hit me on the head with the mallet. My foot slipped. He cut a large notch in the bottom of my rubber boot, and gave me another blow, saying, "According to my idea, that will do the work."

Pa took his kit of tools to town and learned to be a Chiro doctor. The graduating exercises consisted in presenting him with "The Key" and a diploma. They made him swear that he would not give anyone a copy of "The Key" except for \$500. Pa was proud of his diploma. He showed it to Ma and all our neighbors. He always pointed to his name when exhibiting it. He told Ma to call him Doc. Pa tried to fix the bone in Ma's back. He got two chairs, on them he placed the ironing board, and she got her back up, while on the board. He felt of her back and looked at my cap and boot. He then slid my boot along the spine, pounding my head all the way. He thought Ma ought to feel better, but she didn't.

One day he heard where this kind of doctoring started. He had sold his farm, and wanted to know all about it. The full course for students was nine months, but Pa was smart; he learned the whole business in ten days. He could now move the vertebræ by hand and, therefore, had no further use for the mallet and me. Pa is built on the thin plan, but he was so swelled when he returned home that some of his friends did not know him; he had a swell suit and a white shirt. He now knew that the Chiro doctor had lynched him for \$500.

He told Ma he knew all about "Chiropractic"; that the other "Chiropractics" were not in it. He examined Ma's back and found a tender place and tried his hand on her spine. I heard a click and a scream. Ma thought that Pa had broken her back. He had replaced the displaced vertebra by one move of his hands; that was Chiropractic. Mr. Mallet and I were laid on the shelf as useless. Doc's face wore an angelic smile. His self-conceit knew no bounds. He was neck and head above the "Chiro doctors"; who used the mallet and spine-set. Having no further use for us, he shipped us away. When we were again permitted to see the light, we found ourselves in a large office, lying on the writing desk of a Chiropractor. The young man who had received us stepped to the house 'phone and called a lot of students. While they were coming I quickly took a view of my surroundings and saw a picture of Pa in one of the class photos. His face looked good where all else was strange. We were introduced to the students and the Old Doctor who had put us out of business. The young doctor pulled my cap and boot off, to see if I was not footsore from kicking and my head swelled from the poundings I had received. I felt quite indignant, but what could I do, for I had not learned to talk. It is true that I often wished I had two feet, like others, for I was often footsore from the spines that I had been driven against. Thus, we are forced in life from place to place, from one business to another, by surrounding circumstances over which we have but little or no control. Wherever we are, whatever we are called to do, let us do the best we can. Angels can do no more.

As I look back over my metempsychosis I find that greatness does not always depend upon size. The smaller I became, the

more important I was. I have learned to do the best I can in the sphere I am placed. One world is all we can handle at a time. My life of usefulness seems now to be at an end. Since my arrival at this magnificent building I have had but little physical exercise, but I have learned much.

We were very much pleased when introduced to another mallet and spine-set. I thought Pa was a genius. He could put a frame around a cow's neck, so that she could not drink her milk; put a yoke on a goose, to prevent it going through a fence; put a poke on a horse, so that he could not jump; tie a piece of red flannel to a hen's leg, to prevent her from setting; plow a furrow as straight as any man, although the sun warped it while he was at dinner. Yet, I thought Pa was clever, but my new neighbors were more suitably dressed than we were. The mallet had a rubber head. The spine-set had no cap, but for a boot had a heavy piece of rubber nearly split in two, and secured by staples on the end of a carved square stick.

The P. S. C. gave me the name of Spine-Set. He said that some so-called Chiropractors used these sticks to set spines. I heard him tell how and why they came to be used. Up to the year of 1901 *The P. S. C.* had learned to adjust only the dorsal and lumbar vertebræ. At this date an M. D. was a student. He was desirous of being able to move *the cervical vertebræ*, for which he devised the mallet and wedge. These were the names used by him. He taught another man the stick method. Thus several got to using the mallet and chisel to set the spine of the whole vertebral column.

When Doc was striking me on the head, driving my foot against the spines of the frightened patients, I daily expected some serious accident to happen. In my opinion there were more hurt than we knew of. About a month ago I heard Dr. Palmer read a letter from an attorney, who said "that a man, thirty-five years of age, was suffering from tuberculosis of the hip. He was quite comfortable, able to walk and to work fairly well." Dr. So-called Chiropractor said he could cure him; had cured thousands such as he. He declared that the ankylosis of the vertebræ must be broken up, and he proceeded to do so by the most violent treatment on the traction table, with his fist, rubber mallet and chisel. The result was that the patient goes on crutches, is paralyzed in both legs, and is a general physical wreck. The result followed promptly after the treatment. The plaintiff asks for \$10,000 damages.

This is a case of malpractice, a practice contrary to established rules, and productive of unfavorable results. Will the courts decide the above malpractice suit by the established rules of the so-called "Chiros," or those of Chiropractors?

Our time is now occupied in observing and being observed. We are shown to callers as "the Chiros' makeshift." When by ourselves we talk over our past experience of setting spines and

wonder why we were used when the hands were so much better. My life has been one of evil and good; some have been helped and others injured; but I could not have done otherwise, even if I had desired. I am,

Yours very truly,

SPINE-SET.

SUGGESTION, NO. 1.

Suggestion has presented us with a copy of "Auto-Suggestion by Parkyn."

The author says that it is a demonstrable fact that the benefits derived from Magnetic Healing, Sacred Shrines, Divine Science, Mental Science, Absent Treatment, Christian Science, and the various schools of Medicine are due to Auto-Suggestion. We, in a large measure, will give to Auto-Suggestion the same credit. But when the surgeon sets a fractured limb, or a displaced point, Auto-Suggestion takes no part. When a Chiropractor replaces a displaced vertebra, or any one of the three hundred joints of the human frame, or that of any of the lower animals, he does not use suggestion as an assistant or a remedy. He has no more use for it than a jeweler has when fixing the displaced parts of a watch.

On page 6, we quote: "Auto-Suggestion is at one and the same time the worst foe and the strongest ally to be met with in *treating* mental and physical disorders." As we do not treat "mental" or "physical disorders"—we do not treat effects—we have no need of Auto-Suggestion as an ally or adjunct.

On page 10 we read: "Every physical trouble in the human body can be traced to imperfections in the blood. Blood supplies life to every cell." This diagnosis tastes like Allopathy. No school of therapeutics has dared to refute it. They are all built upon the blood theory of disease; even Suggestion accepts that false statement.

Chiropractors know that all derangements of the physical are but disturbed functions performed in excess, or a deficient amount. The nerves transmit life action to every part of the body, even to every cell. Disease is but functions performed in excess, or lack of. All sensations, whether of pleasure or distress, are but the interpretation of impulses conveyed through nerves, and not of blood.

On page 19 Dr. Parkyn states: "The blood is the actual healing agent of the body." All reparatory processes are the work of Innate mental impulse, and not of blood. This delusion has deceived us long enough. Mental impulse produces all action; it is the life of the body. The circulation of the fluids, including the blood, is under mental control.

What has the formation of character, habits, breathing or success by business tactics to do with setting fractured bones or displaced joints? We are not running a kindergarten. Chiropractors are discovering what derangement of the human frame produces disturbed effects.

On page 134 we read: "Would it not seem ridiculous if we found it necessary to instruct our horses or dogs how to breathe as nature intended they should?" It seems to me to be equally as ridiculous for Educated to tell Innate how to breathe in horses, dogs or human beings. If all parts concerned are in proper position and condition, performing their normal functions, there will be no need of prompting.

The economic functions are performed by Innate as well, or better, in the human infant or the lower vertebrate animals than in the adult. Educated bothers and worries Innate by trying to direct that which it knows but little or nothing about.

Chicago, Ill., Sept. 6, 1905.

B. J. Palmer.

Dear Friend: The law of suggestion is just as certain as the law of gravitation. A man hears bad news; he falls in a fainting condition. What caused him? Suggestion. He hears better news, and recovers. What caused him to recover? Suggestion. That is all there is to it. We do not oppose Chiropractic, for it has its use; but don't try to make anyone believe that the mind has no influence on the body. That is all we claim; we don't claim everything, as you do for Chiropractic.

Yours truly,

ELMER ELLSWORTH CAREY,

Manager of *Suggestion*.

The law of suggestion is just as certain as the law of medicine; but the Chiropractor does not need to use either. It is not benefited by them, except as policy, and even then honesty is to be preferred.

Chiropractors have no more need of suggestion when replacing a subluxated joint than the mechanic when entering a tenon into a mortise.

We do not oppose suggestion in business; we make use of it every day; but when adjusting vertebræ, or other joints, we do not need to use it.

We think that there is some good in all methods, but when a Chiropractor fixes what is wrong, returns the abnormal to normal, what more needs to be done?

We maintain that smoking cigarettes will, in time, produce a displaced vertebra, and that by adjusting the displacement the habit will be abandoned. The article also teaches, by inference, that an undesirable habit will produce displacement in some portion of the body.

The smoking of cigarettes produces a poison which is taken into the system and affects sensory nerves. These act on corresponding motor nerves, causing displacements of certain vertebræ, which, by occluding the foramina, impinge nerves, causing an adaptation for the narcotic. The act of smoking does not fasten or form the habit, but the poison which is imposed upon the nervous system compels Innate to make special changes for its accommodation. These new adapted conditions have been discovered by Chiropractors.

An undesirable habit does not produce displacements. It is not the habit or act of smoking that produces the displacement, but the continued absorption of the narcotic. The poison taken into the system affects nerves, so that they are forced to make suitable changes. These acquired conditions have been found by Chiropractors and readily handled.

All drugs affect quantity of mental impulses. That is what they are given for. Astringents cause contraction of tissue. Tonics and stimulants excite more than the normal action. Sedatives and narcotics diminish activity. Diuretics, diaphoretics and expectorants stimulate certain nerves to over-action. A continued use of any one of the above becomes a habit; a desire is created. But what change is made in the body to cause a craving, a demand for a special drug? Chiropractors are able to determine where these changes have been made, and the best of it is, they are able to return the parts back to normal position.

The duties of a physician are to observe the effects his poisons have upon the nerves of his patients. They may be administered by mouth, injection, or arm vaccination. Tetanus is a form of spasm, caused by poisons, affecting the motor branch of the fifth pair of nerves.

Mr. Carèy further says: "It appears from your literature that you attempt to prove that everything from a stub toe to yellow fever, and even corns, are produced by displaced vertebræ."

This statement is not correct. We emphatically affirm that 95 per cent of all diseases are caused by displaced vertebræ. Corns and bunions (the other 5 per cent) come from subluxated joints adjacent to the excrescence. We were not the first to discover that slipped joints in the toes and tarsal bones produced corns and bunions. The S. B. & S. boot and shoe store of this city found such to be so nine years previous. Stubbing the toes displaces joints; as a result, nerves are impinged and corns produced, because of the nerve that ends in the cuticle being inflamed. Where the joints are not ankylosed, they may be replaced by one move and the pain disappears at once.

We have not had an opportunity to locate the poison, or name the kind, which is the primal cause of the displaced vertebræ that impinge nerves and cause the excessive heat which the M. D.'s name yellow fever. We do not know that all such *are*

caused by an undue amount of caloric. All heat in the body is the product of mental impulse action. On many occasions we have located the vertebra, which, by being slightly displaced, pinched a nerve, causing an excess of heat, and have released it by one adjustment. Six years ago I was called to a residence in this city to see a case of fever. The M. D. had called there four days, and had no hesitancy in naming it typhoid. In less than a minute the condition of the patient was changed from that of excessive heat to one of a moist surface and normal temperature. M. D.'s fevers are but overmuch heat. Yellow fever would come in that list. I do not know what poison causes the condition, but the same poison that produced the first case of yellow fever was also the cause of all similar cases.

E. E. Carey further says: "We think that you would have better success if you did not take such radical grounds, for you certainly must be well aware that there are diseases which can in no possible way be connected with any physical derangement."

Friend Carey, we do not know of a diseased condition which has not its cause in some derangement of the skeletal frame. Will you be kind enough to name one or more of those you refer to? There is no disease without physical derangements to make such.

We are well aware that Chiropractic is a radical change, a new departure; that it has made a greater innovation than all other methods. We care not, so long as we know we are right.

SUGGESTION NO. 3.

Some time ago Willard Carver proposed that we use suggestion with Chiropractic.

He now affirms that we do use it, and desires an acknowledgment to that effect.

We here give his entire plea. Our readers can pass their judgment on his demurrer. To avoid repetition and save space, we will give it in sections and answer it as we go over it.

"B. J. Palmer.

"Dear Doctor: Yours received and read carefully. Permit me to answer, notwithstanding the tone of your letter clearly indicates that you leave nothing for me to say.

"The crime of being a young man I will not attempt to palliate or deny. But I will call your attention to the fact that about the time you brought into existence 'Chiropractic,' the science of suggestion was formulated, and wonderful development followed, with which you could not be expected to be familiar, because in those years you were deeply absorbed in developing one of the most far-reaching sciences of the world."

Friend Carver, we are just as busy today developing this science as we were in years gone by. However, we are not now, nor have we been in the past, too much occupied to watch the evolution of knowing how to make our suggestions receptive.

"I used the word therapeutic, with relation to suggestion, for the same purpose as I would in an argument, or plea in a lawsuit; to draw the fire of the other side, thus getting the benefit of knowing their position and strength to use the same against them in the further progress of the case."

You had no trouble in locating our fortifications; you felt the force of our ammunition; now go on with your argument and suggestions.

"Now, to my surprise, what you said on the subject of suggestive therapeutics is most profoundly conclusive that you know practically nothing of the science. You should learn that hypnosis is but an incident to suggestion and the best results are made without it.

NOT A MATERIALIST.

"You write purely of mechanics; the reader would be excusable if he concluded that you are a materialist. I, however, refuse to believe such; if I thought it were true, I would write you a very different letter, because only a few years ago I was wandering in that hopeless field."

You have taken my reply just right. When I explain the cause of disease, I use bones to show material joints which impinge nerves that are thereby materially injured and their functions deranged; the result we name disease. When I go into the realms of ethereal and spiritual, which cannot be demonstrated, but must be accepted on belief, then I am not in the field of Chiropractic. One hundred fifty dollars of material should get a substantial knowledge *which can be shown* to be a demonstrated fact.

"Having thus in short preface swept aside intervening obstacles, let us at once get to the 'meat of the cocoanut' of the whole matter."

That is right. Get down to something real, that which we can see, feel, chew, eat and digest—the "meat of the cocoanut."

"A perfect system for the reduction of disease will not discard any agent or means which never do harm, but always good, and has been known by itself or themselves to entirely remove disease."

"A PERFECT SYSTEM."

Such sophistry is used by the champions of each mode of healing. Should we, therefore, adopt every agent and all means of reducing disease? When we find "a perfect system" we will not adulterate it by adding another.

"The world has struggled in darkness, pain and misery for ages, because of the pre-disposition of those who have been able to take a step in advance of their fellows to arrogate to their discovery all the virtues, and see in it alone the solution of every difficulty. I say this, not in a fault-finding vein, but simply as referring to a very regrettable human weakness known to all in a greater or lesser degree. This clearly appears in Dr. B. J.

Palmer's letter, where he asks, 'Would you not like to see Chiro win for itself on its own principle?' I can only answer that I would thus be bringing myself within the weakness, for the hope is narrowing. I would not raise my voice to detract from the glory of Chiropractic in any event, and certainly would not suggest an aid for it if I were not absolutely certain that it is inadequate to cover the field of cure, used in the sense of destruction of disease. It shocks my natural prejudices even then."

Chiropractic "is inadequate to cover the field of cure." Where would this science be today? How much would have been developed? How many diseased conditions would we have located the cause thereof, if, when we did not succeed in removing the cause by *the first effort*, we had resorted to some one of the many therapeutical methods, which treat effects? We would have made but one step forward and that would have been retracted back into some one of the many systems which had not discovered the primal cause of disease.

"Destruction of disease" is Allopathy. Chiropractic does not destroy; it is founded on the reparatory plan. We make right that which is the cause of wrong doing.

"If I were an enemy of Chiropractic, or even a lukewarm friend, I would keep still, and concede that your very good letters had convinced and silenced me, and I had allowed the giant to go his way, deprived by prejudice of more than half his strength. But not so, for I am a Chiropractic enthusiast, and never permit an opportunity to pass without taking up the cudgel in his behalf.

"I say Chiropractic is inadequate to cover the field of cure. I would not make such a statement without a logical reason, and one which, to me, is entirely satisfactory. Let me see if I can demonstrate its reliability."

Chiropractic would always remain inadequate if its developer would resort to some therapeutical treatment, as many have done, instead of using the principles of Chiropractic to locate the cause.

"You say Chiropractic is purely a mechanical science and consists wholly in the adjustment of subluxations. It has to do simply with keeping all of the articulatory processes of the organism in proper position. In other words, it consists of and finds its ideal condition in a living body, in which all the joints are in their normal position; it is based on the rule, that if all parts of a machine are in their proper place, it will operate perfectly. Is it not so?"

You understand Chiropractic principles. So far you are right in your presentation of the case. Go on.

"I grant you, this would be true if the basic principle were a law of nature; but therein lies the difficulty. Let us examine this under the proper test and see what it is. If it has one exception, then it is not a law of nature, for such—it is self-evident—

must be universal in its application. Solely from a mechanical standpoint, I grant that the rule is universal; but whenever we touch the human body, and perhaps any animate being, we are dealing with that which is not mechanical. The law will not universally apply, unless it may be said, the mechanical always governs that which is not."

If the mechanical, animate or inanimate is in running order, every part in its proper place, then it will go all right, its functions will be suitably performed, when the force is applied. While the mechanical never governs the life principle, the living force always controls the machine in proportion as it is adapted to the work to be performed. This is true whether the being is run by Innate or an engine propelled by steam.

"With this thought in mind, let us examine a locomotive. There it stands on the track; every bolt, tap, lever and journal is perfect. The water in the gauge stands at the proper height. The coal is plentiful and properly distributed over the grate, yet this ponderous monster does not move. The articulative parts of this are perfect; there is no work for the machinist. What is needed? Something not mechanical—combustion, life. This is applied; the engine is alive, but it burns coal too fast, klinkers the grate; the gauges show low water and a high pressure of steam, which is blowing off; fuel is being wasted; its wheels slip on the rails; it cannot pull a normal load."

ADJUSTMENT NEEDED.

You have, in your mind, given us a perfect machine. But upon close examination we find that its mechanism is faulty; several pieces are out of alignment, or not in apposition; the disarrangement of its parts cannot produce the desired results. Its functions are improperly performed; it burns *too much* coal; the damper and grate are out of order; its parts are not properly placed; the gauge indicates low water; steam is being wasted, because the valves are not properly adjusted; the wheels slip on account of their articulating surfaces not being in apposition to that of the rails.

"You say, the engineer does not understand this machine." No, sir, we state emphatically that the propelling power, whether steam or Innate Intelligence, can and will run either the animate or inanimate machine, make each perform their normal functions, the laws of kinematics cannot be otherwise. If the mechanism of these respective machines are not luxated, their functions will be performed with satisfaction.

"But I am helpless; there is nothing out of place with this engine."

We do not admit your statement. A master mechanic can by a careful examination find the cause of functions performed too much, not enough, or not at all. When all parts are placed in their proper position, then the propelling power can run the

machine as desired. If I had a machinist who claimed to understand his business, who could not find and adjust the displaced parts which cause irregularities mentioned, I would dismiss him. His suggestions might suit Dr. Carver, but I want a man who could adjust the machine.

"The whole trouble lies with the things not mechanical. The intelligence, combustion, and steam, which are back of and superior—so far as this engine is concerned, to the mechanical. Teach your engineer and fireman their business, and normal work at once results."

The engineer and fireman (Innate and Educated Intelligence) understand their business. Each has his special work to do, which he could do, if the machine was in working order. The combustion and steam would be in normal degree and amount, if the engine was properly adjusted. It is not the fireman's duty or business to adjust displacements. The engineer should do that—and will, if he has been so instructed—just as Educated Intelligence should repair the human machine when out of order. Suggestions will not repair the engine or the human. *They have to act.*

"Look at the human babe. It is mechanically perfect. It is the engine with the properly filled boiler and lighted furnace."

The babe and the engine, if mechanically perfect, will run all right; each will perform all the functions that belong thereto, in normal quality and amount.

"It is mechanically prepared to do normal service, but its mother restrains it, and constantly mentions that it has delicate health, will not live long and cannot play like other children."

RESTRAINT MAY CAUSE ABNORMALITIES.

The mother, in her restraining, may not give it sufficient food and water; she may abuse the child physically; if so, it suffers. But the lying suggestions are discovered to be deceptive, much sooner than the mother is aware, and the child steals itself away to satisfy its growing ambition and strength.

"Its body becomes emaciated, but it suffers no sublaxations. It accepts all its mother's statements, believes them to be true, and, in consequence, becomes pale, weak and emaciated. The difficulty is not mechanical, but is in the intelligence department. As with the engine, *per se*, Chiropractic has nothing to do. Can Chiropractors reach such a case?"

SUBLAXATIONS DO EXIST.

You can safely bet your last dollar on the Chiropractor in just such a case. He would, if a graduate of *The P. S. C.*, at once conjecture that the child, who was pale, weak and emaciated, had worms. To determine, he would not ask a dozen or more questions, as an M. D., but would look at the under lip of the patient. Finding indications of stomach irritation and worms, he would know that the scavengers were there to consume the de-

cayed, undigested food, being a benefit instead of a detriment. He would reason thus: Worms are scavengers; indigestion is due to lack of mental impulses. Behind all he locates the cause in the left side of the vertebral column. He finds the nerves of mental impulse transmission pinched in a foramen, which has been partly occluded by a slipped vertebra. The dislocation may have been done at birth by a fall, or careless handling by the nurse. The Chiropractor replaces the displaced bone, takes off the pressure, releases the nerves which have been compelled to withhold a part of their vital force, digestion becomes perfect, no decayed food to invite scavengers; the stomach can then assimilate even the worms. Yes, Chiropractors reach just such cases, thereby proving that suggestion is of but little or no value in restraining or promoting the various functions of the human being, or the engine on the track.

"The child's mental attitude must be corrected. The adverse suggestions imprinted on the life mind by the mother must be removed. This can only be accomplished by suggestion. The Chiropractor may attain such by saying to the child at the proper psychic moment, 'I can make you well and strong.' Chiropractors never can correct the child's conditions."

Educated Intelligence should learn the science of kinematics in the animal mechanism. They can replace displaced vertebra, overcome the resistance by using the levers and fulcrums of the spinal column, free the impinged nerves so that they can supply mental energy to their twig ends, which regulate digestion. The Chiropractor mechanically drives the suggestion home, by adjusting the subluxated vertebra which was *the cause* of poor digestion.

"With the firebox and the function relations of the fire the mechanic has nothing to do. In the realm of the machine he is supreme. True, he can adapt his machine to the results flowing from it, within certain well defined fixed limits, but otherwise he is helpless in its presence."

The Chiropractor increases or decreases the heat of the body by impinging or releasing nerve pressure. The fireman regulates the amount of heat by the use of the damper. It is easy to govern either, when you know how. Normal caloricity in animals is retained by the use of frigorific and calorific nerves.

"So it is with the intelligence department. If a subluxation impinges a nerve or blood vessel going to that part of the human machine called the brain, causing it to act abnormally, named insanity, the mechanic—the Chiropractor—is the man for the crisis."

IMPINGED NERVES CAUSE INSANITY

Insanity is *always* the result of nerve impingement, derangement of quantity of mental transmission. The anastomosis of blood vessels prevents serious injury to the organs or parts to which they extend, even if compressed. The Chiropractor and

the machinist are the ones to adjust the human mechanism when the functions are not normal; and the engine, when the fire, water and steam are not as desired.

"But if the same or another form of insanity existed, arising from pernicious and perverse suggestion, and not impingement, the Chiropractor would be helpless, because he has nothing to do with that intelligent force, named the mind or soul, lying back of the mechanical and controlling it. That which causes the heart to beat, the nerves to thrill, the lungs to perform their functions, the warm blood to continue its circuit of the entire body; that mind never sleeps or fails to hear the cries of distress when in need of intellectual help; that never tires standing guard over the organism as long as it remains animate; that intelligence, which is not mechanical, does not depend upon it for existence, and yet is peculiarly its servant."

PERNICIOUS HABITS—THEIR ADJUSTMENT.

The mind, soul, spirit, nature, instinct, intuition, subconscious mind, or, as I prefer to name it, the Innate Intelligence, which Dr. Carver refers to, runs the human machine, performs all functions in a natural manner, providing it is in proper order. Pernicious habits may be contracted: the boy may be advised, suggested to, that he learn to smoke cigarettes or cigars. The first trial is repulsive; it acts as a poison but persistent use, continued suggestion. What was done with the boy? What change was made in order to accomodate, make a demand for the baneful habit? All poisons affect nerves, in an Allopathic sense; but the facts are, as learned by the Chiropractors, the mental brain impulses conveyed by nerves tried to eject the intruder; failing to do this, they do the next best; accommodating changes are made by the motor impulses. Chiropractors have discovered where and what alterations are made. They are able to return the disarranged portions to their natural position, thereby relieving the body of its noxious habit. Injurious habits are acquired by making suitable changes in the mechanism of the human body. How many times you and I have noticed a radical change in the appetite of those who have passed through a spell of M. D.'s fever, excessive heat. The displacement that caused the immoderate amount of caloricity also caused the change of appetite for food and drink. Let me illustrate this by giving a case. Dr. ———, now a graduate of *The P. S. C.*, was addicted to the cigarette habit, consuming about two dozen a day. He was taking adjustments for another ailment. The third day he remarked, "I have to quit taking adjustments, or leave off smoking cigarettes. I have no desire for them; they do not taste good." We "broke" him of the habit by returning the displaced vertebra. Two days later a young man who was a patient made the same remark. Thus we have changed the acquired abnormal appetite back to the natural of those who have used cigarettes, liquor or tobacco. The continued use of a narcotic becomes a

fixed habit, not because of suggestion, but by suitable changes made in the mechanism to adapt itself to the environment. We, therefore, see that the life mind is not peculiarly the servant of the body but the reverse.

"That intelligence which, when in control, can respond to a suggestion with such power as to set up the condition of a high fever almost instantly, in a perfectly well person, and in a short time return normal functions."

That intelligence is acted upon by a fright, sudden unexpected news, or a physical injury. These affect the nervous system. Such suggestions, whether momentary or continued, may produce permanent changes in the action of the heart, the color and texture of the hair. The functions are deranged by accommodating changes made. A large percentage of these are due to pressure on nerves in some one of the fifty foramina of the vertebral column.

"That living principle which can respond to a suggestion, stop action by removing life from the material body (a demonstrated fact). That mind (call it by whatever name you like) that controls the functions and operations of the entire being, to which the mechanical sustains the relation of an incident, and with which the workman has no more to do than he has with the element of combustion of the coal grate."

That principle does not, as you say, remove life from the body but sufficient disarrangement may compel that living principle to vacate, because of it being uninhabitable.

MIND CONTROLS FUNCTIONS.

That mind controls all functions, and like the fireman, creates just the normal amount of heat, providing all parts of the machine are properly adjusted. Innate Intelligence and the fireman, has all to do in creating calorification. All functions, whether in excess, normal, or in less degree, are the expressions of mind through mental impulse; heat being one of them.

"To the end that man might be and maintain his free moral agency, he is endowed with the power to lodge objective impression on the subjective, or life mind, of himself, called auto-suggestion. That mind is bound to accept them as absolute facts, not being possessed of the power of reason and analysis. It, therefore, acts upon them as though true, carrying into effect—as far as possible—the commands, much to the detriment of the physical being, where the suggestion tends to draw away from health and strength. It is an evident fact that within the means of self there is no more fruitful source of health than correct auto-suggestions."

The premises as stated above are wrong. The "life mind," or Innate Intelligence, uses "the power of reason and analysis" to a *wonderful* degree, as is evidenced by hundreds of specimens in our osteological collection.

"The life mind is always open to suggestion, and since our environment has more of unpleasant than pleasant, brings more forcibly to our notice disease, pain, suffering, etc., than joy, health and exuberant life. Our auto-suggestions—if we are not advised—become wrong, suggest to our life mind weakness and lack of health. If these pernicious suggestions are not destroyed by affirmative correct ones, for the purpose of carrying out some semblance of a smile, we will say in displacement of subjective mental force, in other words, result in abnormal and mental impulse, which renders health just as impossible and disease just as certain as the subluxation of a joint, causing some organ or set of organs to act abnormally, as in catalepsy and many others which I will leave to your ability to supply."

COMPREHENSION OF CAUSE.

We do not agree with Dr. Carver, that there is more suffering in life than pleasure. Neither do we believe that suggestions cause such diseases as catalepsy, chorea, apoplexy, vertigo or epilepsy. Each of these are but the result of deranged nerves. Today we comprehend the cause of disordered functions named disease, and no longer need to resort to suggestions from self, neighbors or witches for an explanation.

"Now, in the face of these facts and conditions, of which I could cite a thousand cases, what would a true lover of Chiropractic do? Would he discover some way to correct or place into its normal condition that luxated mental impulse?"

A Chiropractor would find why the mental thoughts were not properly responded to; why co-ordination does not exist. The fireman who would suggest that the cause of the wrong working engine was in the quality of the fire or steam would be thought an ignoramus. The man who would blame the mental for any or all discords, named disease, must certainly be a dullard.

The inharmony expressed is not mental, but in the heterogeneous condition of parts which are not in proper apposition.

ADJUSTING THE CAUSE.

"The Chiropractor would say, When I find a joint displaced, I adjust it. I have found displaced subjective mental impulse. What shall I do—adjust it? If so, how? By the most simple method in the world. As simple as a Chiropractic adjustment. By the subtle and wonderful power of suggestion, by lodging upon the subjective mind an impression correcting the erroneous one. I adjust the subluxated joint so that the mechanical process of the body may not be interfered with. I must now adjust this incorrect abnormal subjective condition caused by pernicious auto, or external suggestion, so that the secretions and other functions under its control will not be interfered with. This I can only do by the power of suggestion."

The functions of secretion and excretion will be performed in a natural manner, as desired by the subjective mind, if the parts of the body so concerned are properly articulated.

"I wrote you at first only to call your attention to the fact that the sciences of Chiropractic and Suggestion are exactly alike in their object and application and differ only in that the object is attained in the one primarily through the physical, and in the other through the life, or subjective mind, and that they are inseparable twins. Neither can be fully and successfully practiced without the other. It is impossible for the Chiropractor to practice without using suggestion."

A "THOUGHT" KILLED BY A FACT.

You say, "The sciences of Chiropractic and Suggestion are exactly alike in their object and application." This reminds me of a beautiful lecture on "Thought," delivered by Prof. Peck. Near the close of his pseudo-syllogism he killed all his false reasoning by the demonstration of an actual fact. A mosquito had lit on his hand. In an unguarded moment he said, "Instead of waiting to think of a suggestion, I will kill that mosquito." Instantly he suited the action to the enforcement of the thought and accomplished the result desired.

"THOUGHT" PRECEDES ACT.

We will have to allow this one point, viz.: that the suggestion of killing the mosquito and the doing of it "are inseparable twins." We will also concede that, in Chiropractic, we must think—thoughts are suggestions—and act. In this sense, it is impossible for the Chiropractor to adjust a subluxated vertebra, or other joint, without thinking.

"You cannot possibly adjust a subluxated joint without leaving some impression on the life mind. You depend, and openly say so, for success on the Innate nerves, which are but channels through which the subjective, or life mind, is constantly striving to perform all of its functions. If this were not true, no subluxated joint could be adjusted. It would be idle to replace it, for there would be no intelligent force to hold it; yielding to the side of least resistance, it would, by force of gravity, return to the abnormal position. You finally succeed by virtue of this subjective intelligence, speaking through the Innate nerves, commanding the adjoining tissues, regardless of pain, inflammation, etc., to have it grasp the replaced bone, and hold it in its proper place. By adjusting, you set on foot an impulse of subjective intelligence that does it. In other words, you remove an impediment which the subjective intelligence had not found a way to do, and it at once resumes its functions."

ENGINEERS AND CHIROPRACTORS ADJUST MACHINES.

Now we agree exactly. The engineer removes any impediment, corrects any or all displacements, so that the life force, whether that be heat, electricity or steam, can run the engine without hindrance. The Chiropractor, Educated Intelligence, removes obstructions, pressure on nerves, which Innate has not, nor ever will be able to do. When this is done, in the engine or human being, then all functions are normally resumed. Why did you not say so long ago? When all parts of the body are in proper position, no displacements, no pressure on nerves, the subconscious mind, Innate, does not need to be reminded of it by suggestion.

"What infinite assistance at this grave juncture could the Chiropractor give this wonderful, intelligent force, if he but understood the science of impressing it with strong and correct suggestions. What astonishing power he could cause it to bring to bear on retaining the adjusted vertebra in its proper place, and by its use ameliorate the distress of adjustment.

"In the cases of Nutting and Storey you used the larvated suggestion; in fact, you always do. You cannot help it. How much better it would have been in the case of Storey if, after having adjusted the subluxated bone, you had been able to have gone on and driven out of his mind all of those adverse and morbid impressions. How much quicker he would have returned to the normal and gone to his family, instead of remaining—as he did—an eccentric."

Dr. S—— was able to do his own "auto-suggesting" after I adjusted the displaced cervical. He was satisfied to live in Los Angeles without my suggesting. He had no desire to return to Duluth.

"I do not ask you to incorporate into, or graft onto, Chiropractic any form of treatment of disease."

You don't? Is that the purpose of your article? You should know that we do not treat disease, not even by suggestion. Therein Chiropractic has made a radical change from treating ailments to adjusting the cause of those troubles.

"Suggestion is not a treatment of disease; it is correcting or adjusting the cause in that part of the organism not mechanical. Suggestion goes back behind mechanical, to the very foundation of life, and has to do with an intelligence which existed before there was a bony structure to luxate.

"I beg of you to not maim a universal law of cure by confining it to mechanical adjustment; separating it into parts and taking only the smaller; thus reducing the law to a rule that has many exceptions. Adopt the adjustment of subjective luxations, as well as those of bones, so that the rule of adjustment may apply to the mental as well as the physical."

MENTAL READY, BUT OBSTRUCTION STOPS.

If the cause of abnormalities is in the mechanical, it is not in the mental. The Innate is ready to perform all functions in a normal manner whenever its organism is in suitable apposition. The Innate knows much more about human economics than Educated ever knew. So far as I understand, Innate always did exist; it is transmitted from mother to offspring in all animated beings. It has been making experimental changes in its mechanism, for the purpose of accommodating itself to new environments. It starts in the new being with a knowledge gleaned from an experience of a life, the length of which we have no conception. It has as full a comprehension of all its functions, which it runs as intelligently on the day of its birth as in adult life. It is infinite, unlimited in time and accomplishments.

The Educated Intelligence knows nothing of running the human machine of which it has the outward care. Its education has to be acquired by years of experience. Friend Carver would suggest that this upstart of today should dictate, demand of its progenitor and inform it how to run its business, its life-sustaining functions.

The animal economy, the functions which run it, are as perfect, or more so, in the illiterate and idiotic of mankind as those of exalted birth. Why should Educated suggest to those superior?

INNATE SHOWS INTELLIGENCE.

In many instances we find that Innate has built piers, locks, made grooves into foramina, elongated processes, ankylosed joints, made new ones in unusual places, enlarged bones to accommodate itself to new conditions imposed upon it by displacements in its skeletal frame. When Educated returns displaced bones to their normal position, Innate will undo that which is no longer needed, as is done, in temporary callus.

"The Chiropractor renders his patient passive for mechanical adjustment. In order to be properly equipped he should know how to render him mentally passive to subjective adjustment, then, the two working hand in hand, as the Creator has intended, untrammelled by external pernicious or adverse influence, no diseased conditions could resist this double-headed adjustment of the mental and physical.

"It is because I love Chiropractic as ardently as a school boy does his first sweetheart that I beg of you to bring the science of suggestion down to date and make it the working companion of Chiropractic. Please give it a trial before discarding it.

Yours truly,

WILLARD CARVER."

WHAT IS POWER?

How great a counterpart to the study of things as we have them do we find in seeing power expressed everywhere, and how little is known of power. *Energy* and *force* are terms to use, yet how little is known regarding them. We see the "power" of electricity only after it has been utilized, and yet, what is electricity? This question was asked of a class in school. One boy raised his hand. "What is it, Johnny?" "Please, teacher, I knew a minute ago, but I have forgotten." The teacher looked at him sadly and said, "Isn't it a pity that the only mortal who ever knew what electricity was has forgotten?"

Edison makes no attempt to define it. Marconi says we simply harness it; Tesla says we concentrate it; but what "it" is, we do not know. Yet as little as we, as Chiropractors, know about it, we have at least added one step more to what electricity is than electricity has in its own study today.

Electricians study electricity in volume only, not in detail. We look over the world and two things only come to view—(1) force, power, energy—and (2) matter. Everything is divisible in those two categories. Matter is reducible into atoms, and atoms into electrons, and electrons into we don't know what; and, after all, we don't know what matter is. We take force in great volume and we call it electricity and reduce it into currents and watts, and then the Chiropractor adds the next deducible step—*foruns*—and then into what—we don't know. We again reach infinite problems. But, you argue, infinite problems have nothing to do with finite man, and that is true. In the study of the unit we have only to deal with that unit itself, not with infinite problems in addition. Yet science knows no unit in its investigations. Philosophy, Theosophy and Psychology have not stopped at the boundary lines of the shell of man in their studies; they have even considered the problems of infinity, so far as their finite minds could see, think and reason.

The infinite problems have been brought down as far as they could to the realms of finite considerations, and while we shall try to confine ourselves to the finite consideration of things before us, yet this is impossible, because of the study of the source from which power or matter comes is boundless; therefore, when we consider a thing as it is, we must consider what it was and what it is to be; where it came from and to where it is going. As I have previously stated, the realm of observation varies because some men can see only one foot ahead and others can see miles. One mind can but grasp the problem of the hour, while another grasps problems of hundreds of years hence. People are advancing weak, foolish, crazy theories today which will be utilizable to minds thousands of years from now. We have but to look back a short space of time—eighty or one hundred years—to realize how little this world has known of power, force or energy. We have watched the progress of the world in

its tangible form for thousands of years. It has been handed down in tangible form, and yet, after scanning these pages, going through and into them carefully, you will find no records where human mind has reduced the question of power, force or energy into a *practical* unit.

The problems of electricity, if you will call it by its present name, have been deduced practically in the last one hundred years. Up until ten years ago, electricity was regarded as a science, because electricity in infinite proportions could be reduced to finite quantities and sent through wires for thousands of miles, and what more could be wished for—certainly science had reached its limit. Along came another thinker who said, "I am going to do things *without* wires; I shall send messages and do all that you have done with wires, without them, and I am going to work it on the simple hypothetical basis that by increasing power and quantity thereof, sending it off with greater velocity—while the loss will be greater in transmission, yet the expression will be carried farther."

He was scoffed at; laughed at; he was insane, foolish and wild; he was erratic; the place for him was an asylum.

What is electricity? It is a current of *something* going through wires; it is a current of something going through ether, without wires. What is this "something"? Is it a higher state of vibration? Yes. Of what? Electricity makes no answer, science does not know, and so as an answer I place the word "foruns," indicating *units of force*. But to say "units of force" does not tell any more what a unit of force is, any more than "electricity" tells what a current of something is, but it at least disconnects the unit and upon the unit other composite forms are built.

Let us take the study of electricity as we see it every day. It resolves itself into three combined sections.

A dynamo (1) is a supposed generator—it generates nothing. Generation means to give *new life* to something which did not exist before. In the technical use of the word, nothing in the world, in any form, is being generated today, never has been, nor never will be, because the world is but a world of evolving matter and spirit—changing form, character and degrees of forms and characters, that's all!

This dynamo concentrates or gathers much into small form; it compresses many foruns, in which sense the dynamo is nothing more nor less than a machine that concentrates. Concentrates what? *Foruns*. In a high state of concentration, then, the dynamo gives foruns to whatever other conducting material is attached. In all material instances the dynamo has (2) wires. In electrical terms they are known as *positive* and *negative*, the positive wire leading from the dynamo and the negative wire leading to it. The positive wires possess one attribute which the negative does not—the positive wire is the vital wire, carrying something

which will do something; the negative wire carried back that which has been utilized—from which an attribute has been lost. This is only one center in electrical terms and that is the dynamo; that is the point, place or specific spot from which electricians figure everything, from or towards; that is the only center—hub—they have it.

Granting that the dynamo does concentrate force, it must be transmitted, and is, through wires; and to be transmitted it must have a place to which it can be transmitted. It has, and that is our (3) motor. The motor utilizes that which the dynamo concentrates. Suppose that our dynamo concentrates 100 per cent of current per minute; the transmission of current is equivalent—100 per cent per one minute; the expression of motor function will always be the same.

Put a different phase on this again. One hundred per cent is a standard in decimals; it is the standard with our American dollar; it is the standard of all considerations that I know. Suppose we replace the 100 per cent of current and say that its product is one hundred revolutions per one minute, *i. e.*, one hundred revolutions per minute, if the dynamo produces 100 per cent of current per one minute, or say that 100 per cent of current per one minute makes one hundred revolutions per one minute. Thus you see that one per cent of current equals one revolution per one minute, and there you have the unit, showing you that this is a simultaneous action; we will say that one revolution per one minute equals a product of one per cent per minute. One depends upon the other and the other depends upon the one.

Another phase. This positive wire becomes positive only so far as it is charged with something in addition to the wire, which makes it positive; without that something it is a dead wire. Notice the question upon the blackboard—are you a live wire? By that I mean, are you *positive* or negative? How many people going through this world are positive? Not many. There are a great many half-live wires; a great many quarter-live wires and there are also a great many that are almost dead wires. Let us be "*live* wires!" The difference between the positive wire and the negative wire is that one is charged with a heavier voltage of current than the other.

The reception at the dynamo end of the wire is 100 per cent of current per one minute; or you can reverse it and say one per cent of wire equals the transmission of one per cent of current; or reverse it again and say one per cent of current will have transmission through one per cent of wire, showing again that the fact of transmission of currents is equivalent purely to the amount of wire through which it goes; thus it is simultaneous—the larger the wire the more current; the smaller the wire, the less current. Less current; the smaller the wire, the less current. Less current, then, indicates small wires and more current larger wires.

Go to the motor. One per cent of current at the motor equals one per cent of motor function, or one per cent of motor function equals one per cent of current—there's our standard unit of expression of dynamic power; the transmission of electrical current or the expression of electricity when it reaches the motor. Reverse the order, and take this on a different basis. Suppose that 100 per cent of current equals one hundred revolutions in the dynamo and 100 per cent of current equals one hundred revolutions per minute in the motor, and then suppose that in the dynamic half of the positive wire we have our 100 per cent of current being transmitted, and then suppose, in addition to this, we add or interject a rheostat upon this wire, the rheostat being equivalent to cutting off 20 per cent of current. As a product of the motor half of the positive wire, we are only transmitting 80 per cent of current; we have now cut off 20 per cent. As a product you will only have 80 per cent of current, and that is equivalent to only eighty revolutions per minute in that motor. It is hardly necessary to ask the question, What would you do in such a case? The illustration is so simple, so plain, so practical, that you could hardly overlook the solution.

Now, would you begin trifling with the eighty revolutions per minute, stimulating or inhibiting, so that you raise or lower it—to 100 per cent, and do all of this by oiling, greasing, injecting or squirting some obnoxious, vile nostrum into the motor? No; you would consider such a man ridiculous, most unpractical and very unscientific. Any electrician would object seriously to having his motor trifled with in such a manner, nor would he permit of any mechanic to get into the interior of that motor and cut out forty feet of wire, or one or two fuses, or one or two chunks of iron, because you thought they were in the way.

Again, let us look to the electrician in our own schoolroom. Suppose one of the lights in the cluster above my head does not give the light it should—the cluster is not brilliant enough. I telephone to an expert electrician, "I have something troubling me." He comes. I bring him here and say, "Mr. Electrician, notice those globes; they are not giving me the light they should. I want you to fix *them*." "But, doctor, there is nothing the matter with those globes; the trouble is down stairs in the basement." "No, don't go down stairs; the trouble is right here. I can see where the trouble is—you can not tell me where the trouble is—here is where I am not getting light." "But, doctor, the cause of all this is down stairs." "I don't care what's down stairs, there is trouble here; now fix it." There is no use of that man trying to argue with me, because I think I know where the disease is—I see the symptoms, effects and troubles—the thing I see, feel and know is wrong is right here—not down stairs. May be there is something wrong there; I won't dispute him; I don't know about that, for it is hidden under cover; but I do know about these things on the surface, and this is what I think he should fix.

But going back again to our motor. Do you suppose for a minute that the electrician would do otherwise than to remove the rheostat, which is shutting off the current? No. That would be his first thought—"Where is the short circuit? Where have you grounded the wire? Where have you introduced the rheostat?" His first aim and object would be to trace out and follow up the paths of these wires from the effect back to the location of that grounded wire; or that short circuit or rheostat. He would trace it out, inch by inch, foot by foot; and mile by mile, if necessary. That which he would hunt for would be that which interfered with the transmission of currents. While I know that the thing wrong is in my globe, or the telephone, or in the fan there—What *I* see is the *effect*, and the electrician knows *the cause* is somewhere else.

Is it possible to goad on a tired horse with the whip? For perhaps a foot or two, then he lags. Is it possible to make an entirely fatigued man do more by the injection of whiskey? I would say to the prohibitionist who is so opposed to intoxicating liquors, that more drunkards are being made today by doctors than *all* the saloons put together. The first taste of liquor is frequently obtained in the sanctity of physicians' offices or the Christian home in medicine.

Now, with the thought of where the trouble is with our motor on our minds, because it is not running up to standard of 100 per cent of one hundred revolutions, what we should do is to go back to the place of cause. Once you have found the cause, then it is only a question of adjusting it.

Let us see the value of the two words, "treat" and "adjust." An effect is the only thing that can be treated—you cannot *treat* a cause. A cause can only be adjusted—not treated. These effects in the lamps, in the fans, in the telephone, can be treated, but they cannot be adjusted. The effect in the motor can be treated, but it cannot be adjusted—only *the cause* can be adjusted.

We talk about adjusting a cause—we don't. We talk about adjusting a vertebra—we don't. What do we do? We are just putting one little bone into place; that does not constitute an adjustment. An adjustment is a re-establishment of currents—that is done independent of us. I have not really re-established the current—I have but put the material things together and the current re-established itself.

We have drawn on this blackboard a practical illustration of things known and seen every day, everywhere, by every electrician. I don't care if it is a ten-year-old school boy, studying the first principles of magnetism—he has that idea fundamentally placed in his mind—he never gets away from it. Electricity does not vary; does not change; has no frills or fashions, here today and gone tomorrow; the fashion of electricity today is just the same as it was one hundred years ago, the same as it always was—that is *science*. Electricity is brought down to scientific deductions—the only thing we are studying today is how to apply

it more economically; to the best advantage for the best service. The fundamentals do not vary from the first principles up. This is worthy of consideration, yet when we jump over to the records of medicine we find it is a continuous, wiggly road, strewn with corpses on either side of exploded ideas, running into the millions—nothing holding tangibly for over two or three years at the most.

By contrast we can also think of the science of electricity, comparing that with the discrepancies of medicine. Electricity today has no laws to protect it; science doesn't need laws. Medicine *not* being a science, needs something to hold up its tottering form. Are Chiropractors scientists or physicians? Do we, with science behind us, need laws to keep us from falling? I have said that science needs no laws.

Let us forget electricity for awhile; think of man, and let us look at him as if we had never seen a man before. Let us study man as if no one had ever studied him in the past; study him as he is in all his simplicity and grandness.

Primarily, man is based on a *brain, nerves and tissues*.

Here we really have man complete, and for want of better illustration, we shall call our tissues a stomach. The brain has always been regarded as a dynamo. You know this to be a fact as well as psychologists, scientists and physicians of the old and late schools. It is not a recent idea; one of the very first fundamental ideas that any man ever thought when he realized the importance of the mind working through the brain. He links the thought of the dynamo with the fact that the dynamo transmits something electrically. The brain has not always been regarded as a *human dynamo*, but it has had terms applied which expressed that thought. Realizing that the brain is a human dynamo, which all scientists and thinkers have conceded, then considering that all tissues are as so many motors expressing impulses in every portion of the body, then we must logically conclude that something, somewhere, transmits this dynamic power from the brain to the motors—logical conclusion could not be otherwise.

Naturally, then, granting that the normal brain will be equivalent to 100 per cent of current and that the impulse, the tissues (in this instance the stomach) does express 100 per cent of current (of function, if you will), then there must be something that connects the stomach with the brain, which transmits 100 per cent of current, and that we have not a positive and negative wire of copper, but an afferent and efferent nerve. The nerve has not added anything new—we are simply compiling our illustration in a different form, placing new interpretations upon the world-old complications.

We have an efferent nerve which is, in electrical terms, a positive wire. We have our afferent nerve which would be, equivalently, our negative wire. We have realized that to have

electric light, to have telephonic communication, telegraphic communication, movements of an electric fan or motor, movements in anything electrical, there had to be a thoroughly unbroken current; a through circuit; a cycle of currents which were at no point interrupted. We must bring this application home to man; that to have a stomach working equivalent to 100 per cent we must have an unbroken current—an unbroken cycle—a cycle wherein 100 per cent being concentrated, being filtered, as it were, through the minds of intelligence, passing efferently into that stomach. Then creation, transmission and expression must be equal, that is, getting back to electrical or mathematical terms, if you will, if 100 per cent of current is equal to one hundred revolutions per minute, then 1 per cent of current going into the stomach will be equivalent to one hundred revolutions per minute; that is, as long as the stomach can receive and express the function of one hundred revolutions per minute it is doing its duty—no more, no less. We want neither more nor less; we want our standard, and we want that standard to be uniform at all times.

This seems logical—it is *practical*. The only difference we make between man being the same as a dynamo with wires and motor is the addition of one essential thing and that is *intelligence*. Man as a compilation is the product of intelligence and but speaks the thoughts of logical inductions and deductions. The dynamo was not made by natural intelligence, neither were copper wires or a motor. Notice the fact that it took man with his intelligence to make a dynamo, a wire and a motor, therefore, they are products of man; man in turn is the product of an intelligence, so that we add to man (as an electrical unit, if you will) an intelligence, and when we add to man the additional factor of intelligence we take away from human currents the aspect of their being electricity. The current in man then no longer assumes the character of electricity. The latter would as soon shock a man to death as it would to stimulate him back to normal. It would as soon char a body as it would attempt to grow plants if it were bright enough over them.

We see the all-importance of intelligence behind every act of man which makes it a superior thing to the actions behind the dynamo or motor. The motor and the dynamo, however, exist in their present form but a mite of time compared with the time that man has lived, therefore, man can live without dynamos and motors, but man cannot live without intelligence. Notice then, that while we have currents in man, they are *intellectual* currents, and we briefly then, get the idea of age from having currents. Mental currents indicate that they are the product of the mind and mind is an attribute of intelligence, therefore, they are intellectual cycles.

This brings to mind again, the additional factor that 100 per cent of creation, 100 per cent of intellectual revolution, is

equivalent to transmitting 100 per cent of intellectual currents, and the transmission of 100 per cent of human currents means 100 per cent of intellectual function in the stomach of 100 per cent of intellectual revolutions, showing that every revolution follows an intellectual unit.

Suppose that we go back to one of the greatest stumbling blocks in medicine. We have shown you that (granting the point that the brain is a dynamo, meaning to imply that every portion of our body is in touch with that brain) we can only work out this solution by saying that there must be and is a direct connection. Indirect connections do not go in electricity; they are not practical; they will not stand the test, nor are they utilisable to that end.

I know you are questioning the point somewhat. I questioned it myself before I was certain of my grounds, which are: that the electrical circuit, to be complete, must be continuous. To have human intellectual circuits they must be continuous—matter with a continuity of current. Continuity of current plus continuity of matter means continuity of intellectual function.

In the study of man the brain is within the cranium; the spinal cord passes through the spinal canal, and then the passage of nerves in small bundles out between the intervertebral foramina. These intervertebral foramina are an interesting study. They are not solid foramen, i. e., the bony structure surrounding is composed of two half circles, one half circle being above and the other below. Each one of these half circles is subject to being moved because half of the circle exists as a part of another bone from the circle above, or below, as the case may be.

This spine, while it is the backbone of man, is subject to many distortions and contortions, twists, jars and wrenches, sprains and bruises, so much so that it is nothing uncommon and is most common, quite so, that every man has one, two or three (up to a dozen) of these little vertebræ subluxated, wherein bone, the hardest substance in the body, is pressing against nerves, the softest substance in the body.

Notice how nicely the nerves that have exit from the spinal cord fill the opening or foramen—you can see what it would mean to displace one bone or the other, making the opening narrower by a fraction of an inch because of the displacement. To produce pressure upon nerves means to interfere with the transmission of currents. This vertebral pressure upon nerves is the illustration that I wanted to bring in regard to the rheostat—the introduction into the human body of the rheostat idea; bringing into the human body the idea of grounding a wire or the short circuiting of currents.

Let us then introduce the idea of a rheostat into our human man—you will notice quite frequently I make use of the expression “human man,” because I recognize two kinds of men; the man who is dead and the man who is living; the man who is

living is the human man; the man who is dead is a man, and the man who is half alive and half dead is not human in the fullest sense of the word; he may be mad, raving, a *mán*iac or a brute—may be anything but human).

We have noticed the idea of pressure upon efferent nerves and whereas before we had 100 per cent of current being transmitted efferently, we now notice 20 per cent of resistance and we have 80 per cent being carried to the stomach, consequently we will only receive in that stomach 80 per cent of power, and as 1 per cent of power is equivalent to one revolution, we will now only get eighty revolutions per minute in that stomach. What are we going to do? Here are two ways:

A patient comes to a physician's office: "Name? Age? Occupation? Color of hair, eyes; height; weight. Let me see your tongue and take your pulse. Kidneys working well? How about the bowels? Let me test your heart. Any trouble with your liver? Lungs? Spleen? How about the color of fæces and urine? etc.?" The answers are to get the general constitutional arrangement. Then he will get specific: "Do you belch gas; do you have a burning pain in the stomach; what do you eat? Do you have trouble in digesting it? What foods do you have the most difficulty in digesting?" To all of this he adds, after all the questions have been put and the yeas and nays duly entered; "You have 'gastritis' or 'heart-burn,' " or some other name—one is as valuable as the other, or as valueless, perhaps. After listing this detail, his next thought is. "What does the Pharmacopœia say to give this man?" He scans the pages and finds that for the same effects there are about four hundred different doses. So he plays a game of blindfold, picks up the tail and tries to put it on the donkey by closing his eyes, practically saying, "Whatever prescription my finger drops on, that one I will give first." There's as much science in that kind of guess work as for him to have his eyes open and say, "If this doesn't help you, come back and we will try something else." What should he do? He recognizes there is something wrong with the stomach. He recognized there was something wrong with the stomach, but he is far from being an electrician; he is far from being analytical enough to go back to cause; he is far from reasoning cause away from the effect; he goes no further in this investigation than to realize that something is wrong in that stomach and it is that something he is going to domineer over and force it to get well—he is going to compel it to get well and if one medicine isn't strong enough, he will get one that is; this thing must give way to his efforts.

Time goes on and the patient gets worse and finally the only permanent relief he gets is in heaven. In the electrician's case we realize that he analytically, logically, practically and scientifically traces out the positive and negative wires, inch by inch or mile by mile, until he reaches the place where there is a

short circuit of current. Does the physician do this? No; he knows nothing about the definite connection of the statement that he made that the brain was a dynamo and that tissue was a motor—he doesn't have the third link that unites the two things. This is where he misses—this is where we gain.

We have our direct nervous system connecting one with the other; he has the sympathetic nervous system. Does he think for one minute of tracing these wires inch by inch back to the subluxation, to the rheostat; to the point of interference of transmission of currents? No; it is not important; never studied that; don't know anything about that—all he knows is to observe effects. Things in electricity are scientific; things in medicine are hypothetical guesswork.

By comparison we have shown that one is equal to the other with the exception that man has the added factor of intelligence. Would you, in the electrician's place, stimulate the motor and try to make the 80 per cent motor reach 100 per cent? Would you, in the case of man, try to stimulate the eighty revolutions to do the work of one hundred revolutions? If so, how long would it last? You wouldn't do it, yet physicians do it—it is all they know. This is to be regretted, inasmuch as this statement is a fact that is simplicity in the extreme, such as any mind can grasp—I say it is to be regretted that the physician will hold back, try to stifle and choke humanity from getting the thing they need. Every living person in this world should have that idea implanted in his mind tonight; yet listen to the minds, words and actions of those who could help us to put it there and you will find they are the stumbling blocks, they are the men who hinder progress, who hold us down.

Again, this lecture gives you a very simple talking point—a talking point that you do not have to demand that one be scientific to see, yet its very simplicity is its greatness. It is often said it takes a great man to see a simple thought, and that it takes a simple mind to see a great thought. Let us be great thinkers and see little thoughts—think little thoughts and be great thinkers. Here is a little idea, a simple thought can become capable of seeing it. Isn't it peculiar then, if we see and are conceited to believe that we do see, can we say that the world gone by was composed of people who did not think? Did they think? If so, why didn't they think that? The world should have had it; it did exist; has always existed. That idea is just given a new dress, but the thought, idea or definite action has existed in the mind of Universal Intelligence from time immemorial. It is not new.

Universal intelligence knew everything we now know, and then some. We are but interpreting what she has always thought. Let us think of the connection with your Chiropractic education; if you think the fundamental principles are great, don't think for

one moment that you are adding to your store of knowledge by studying medicine, chemistry, ophthalmology, history, bacteriology or by studying any other ology of today. If you wish to advance chiripractically, *study power through material things*, which is the *science of electricity*. Its principles are true to facts and man.

DOES IT PAY TO DICTATE TO INNATE?

The P. S. C. believes and teaches that Innate has all the power necessary to control and create every function conducive to life and health. It is not for man to dictate to her, nor is he able to do so if he wished. It is of frequent occurrence to see tests tried where the object was to coax this Innate to do more than she was able at that time. In every instance, the growth may have been hastened, but it was at the expense of its quality or size, etc.

In agricultural pursuits the results of these experiments are truthfully told. I wish I could say as much for "*the practice of medicine*." Its deaths, sicknesses and other disasters, following its ruthless guessing, are covered over in the cemetery, where its victims are unable to tell the truth. If Innate could be pushed, patients would cease to be sick, nothing but health would prevail wherever the M. D., or other effect treater, has tried his charms. The life that exists in trees, plants and animals is the same external power that is converted into mental impulse and becomes that part of us which we could not live without.

The following recital of a vegetative test was copied from a recent magazine known for its authoritativeness. If man would but start the object and leave the rest to this power, minus the dictation, it would produce the best of results, whether in the human, beast or plant. If the body is unable to do this, then hunt up the cause and adjust it, take away the impingements upon nerves which make them unable to convey this power. This is not dictating to nor assisting Innate in *her* work; it is but opening that which an accident has closed. By so doing you but let Innate give vent to that which was there, but could not get through.

"One of the latest devices proposed by an expert of the Department of Agriculture for improving the growth of plants and fruits is that of placing them under colored glass, the idea being that light of particular hues is especially favorable to vegetation. The expert referred to has recently been experimenting with strawberry plants grown in hot-houses under glass of different colors. His conclusions are interesting.

"Orange-colored glass," he says, "cause the plants to grow more vigorously, but at the expense of the berries, which were both smaller and later in developing than when the plants were grown under ordinary conditions. Under violet-colored glass the plants yielded a great quantity of fruit, but it was slow in

ripening, small and of inferior quality. Red, blue and green glass all proved injurious to the growth of the plants. The finest berries and those which ripened earliest, were grown under plain white glass.

"It would appear, then, from these experiments, that light of different colors does have different effects upon vegetation, as has been claimed; but that, as far as strawberries are concerned, all the colors that sunlight possesses, when united in ordinary day-light, are more effective in the production of good fruit than any single color.

"Of course, it is not the color itself, but the character of the light which gives that color that produces the effect. Every color of the sunbeam corresponds to light possessing a particular rapidity of vibration and a particular wave length in the ether. Colored glass cuts off some useful rays by absorbing them."

Color treatment, "Chromopathy," is still used by many petti-foggers to try and coax Innate to show herself, to make his patient feel better. An illustration: A certain insane hospital has two wards. In the first everything is blue, even to the floor being so painted; the window panes are blue, etc. This is used for those patients who are fractious or violent. They soon get despondent, it culls down their actions—"Get the blues." The second ward is a fiery, blood red. When a patient has "the blues" they put him in here and that acts to him like a red flag to a bull—it infuriates. I have been informed that they have a regular line that have been going the rounds, *between these two rooms*, from the time these wards were started. When "blue," put him in the red room. This makes him so wild that he needed "blueing" again, and when too "blue," away he went into the "red" room. The prospects for his getting loose are few and far between. This is but a typical example of what coloring will do for the human body.

In aiming to assist "Nature" it was done at the expense of some other quality of the plant. The same is true of the human body. Stimulate and you have a relapse, deaden and you lose life. The Chiropractor does not dictate to Innate. Does it pay to try and be Innate's master?

MISNOMERS.

"Misnomer—Any mismeaning of a person or thing; a wrong or inapplicable name or title."—*Webster*.

The P. S. C. is thoroughly equipped and has the necessities to prove many terms, now in daily use by therapeutical schools, are inappropriate.

Functions, and the physiology of them, were named hundreds of years ago when superstition reigned. "Recent improve-

ments have been made"—yes, *upon the same basis*. The text of this article shall be to tell why a few terms should be stricken from all dictionaries pertaining to maintain exactness.

Chiropractic is a philosophy. Sciences are but branches. "Philosophy—the general laws or principles under which all the subordinate phenomena or facts relating to that subject are comprehended."—*Webster*.

This concentrated compilation studies the science of power, whence it comes, how converted through the mediums of the mind, mental and brain impulses, in what manner that organ transmits them to all tissues of the body, and in what way, when expressed. They perform functions and how each is performed, is accurate work. The nervous system, according to Chiropractic (which is non-therapeutical and non-superstitious) is distinctly a science, consequently different than any. These facts have been demonstrated by that unique *P. S. C.* study, nerve tracing. It proves the existence of a sympathetic nervous system, supplanting it with a direct communicating system, which is definitely proven every day in *The P. S. C. clinic*.

This is one instance where Chiropractic comprises the "laws or principles under which all subordinate phenomena are comprehended." Having an instruction of power and through what mediums and how performed make its details complete from power to expression, going; and impressions afferently, which in turn cause commands to respond intelligently.

"Sympathetic Nervous System." All nerve fibrils have their origin in two brains. From there each has its tissue cell to go to. Each fibril and corresponding impulse has specific functions to perform, which is accomplished by cellular expansion. If each receives its impulse direct from the brain and carries it undeviating, without anastomosing, and places it into action at peripheral, where can there be "sympathy"? Dunglison says: "Sympathetic affections of an organ are those morbid *phenomena that supervene without any cause*." Can you imagine an effect without cause? How well known is that phrase, "The law of Cause and Effect?" Cause *must* be a precedent. A scientific knowledge of voluntary Innate functions were never known until the advent of Chiropractic. "Sympathetic Nervous System" was the best known previous. Now that better supplants, let us willingly drop the misnomer.

Where is the person who can scientifically define "Nervousness?" I know what the accepted meaning is. When you have that, what have you? Trembling or not; steady or shaking, they will say, "I am extremely nervous." "I cannot control voluntary functions at the command of the will. My will and physical don't hitch." Why? The educated brain is a reserve station for impulses which can be utilized at command. If there exists an osseous obstruction so that impulses cannot be delivered to point of expression, we are "Nervous." I prefer the terms *General*

or *Local Incoordination*. This term expresses intelligence, a thought deep in character. "Nervous; Strong, also Weak, irritable, excitable."—*Webster*. You may have moderate incoordination. If so, "weak" nervousness. If there be great incoordination, "strong" nervousness. The latter word can aid and is stretched to mean *anything*, because it involves no definite function. It is another superstitious misnomer, although a useful word to use when the M. D. or D. O. does not comprehend the cause of incoordination.

"Coordinate—to give common action or condition to; to regulate and combine so as to produce harmonious action."—*Webster*. It will be quickly seen that any inharmony, slight or great, is incoordination, which signifies that it is not based on "perhaps, guess so, may be, I think so, we will try and see," unstable foundations.

"Nerve Pain" and "Neuralgia." Nerves are mediums that carry impulses outward and impressions inward. When expressed peripherally they are functions. Impressions are conveyed inward by afferent nerves. When each impression reaches the brain it is interpreted as pain, taste or smell, good, bad or indifferent, in accordance with its sense; where and how fibrils received their impressions. If the reader comprehends fundamental principles of Chiropractic, philosophically, he will know that pain is only recognized at the brain, although knowledge of its location, that which makes the *abnormal impressions*, must be at periphery. "Pain" is a term vaguely understood by preceding schools. Ask a physician or Osteopath "What is pain?" and see how bungling will be the answer. Pain exists as an interpretation of external abnormal conditions, a warrant to correct the incoordination. If efferent nerves were carrying full quota of mental impulses, and could express themselves, without interference, "pain" would be an unknown quantity. "Neuralgia," "Tic Douloureux" and many like names are misnomers; trying to tell something which does not exist. Why use them? Ask a 1908 P. S. C. student "What is pain?" He would reply, "It is the mental acknowledgment of an efferent mental interference that needs adjusting."

"Neuritis—inflammation of a nerve."—*Dunghlison*. "Inflammation" exists only in that tissue in close proximity to the nerve periphery. Excessive heat does not exist within the nerve itself unless other nerve fibrils, those that convey calorific functions to its sheaths or substances, is intensified. One lobe of Innate brain has the output of those impulses which, when expressed at peripheral, are calorific. The nerve itself is not "a calorific nerve," but conveys impulses of that character. Nerves can be inflamed only when these impulses are *stimulated* by a slight impingement upon them somewhere at the spinal column. In the common acceptance of the word "inflammation of the nerves" is a misnomer.

"Neurasthenia." A term and condition not understood by M. D.'s, D. O.'s or anybody else. When a patient is more or less run down and they can do nothing to correct it, they tell the patient, "You have neurasthenia, nervous prostration. Your general nervous system is run down and this is incurable." Ignorant consolation. If they but knew that Innate, the power behind the throne, is unlimited, and if given half normal opportunities to express herself through brain and nerves, the patient would rapidly reach normal, they would never use such death hinting terms again. Beyond "Nature," which is also above the M. D.'s and D. O.'s comprehension, they know but little, if anything, about this power, so cannot take it into confidence. The physical is all to them. It is this which is diseased, therefore that which must be treated. They do not know, and as a body, fight progression, therefore do not want to know the cause which is making a short circuit between the seat of power, brain and its expression, through the physical. The above, to one knowing better, is as meaningless as a boy sent to catch babbling echoes. Any physical will run down, that is, deplete itself if it cannot get enough mental impulses to maintain the physique. The incoordinated body is the one unable to get impulses through the occluded intervertebral foramina. What is the thing to do? Let the patient go unaided by calling the disease some name that is as vague as the cause of disease is to him who is treating it, or have a knowledge so complete and systematized that the cause can be quickly and accurately located, and then adjust it returning the body to normal? Which?

"Neuropathy," "Neurapathological." Terms used to denote some diseased condition which has never been definitely located nor its symptoms defined. In every instance, so named by the M. D. and D. O., I have no trouble to quickly prove that it had definite tissues involved, specifically located. Nerves are placed on a par with other tissues. According to "regulars," the superior importance of the nerves conveying mental impulses over everything else, is not recognized; every tissue in the body is subject to its commands, which output is controlled and regulated by the brain. Harmony would exist, in all tissues, if these were normal and uninterrupted. The above named diseases are definitions given for combinations of expressions, in which nerve substance is not involved and never agree in two people alike, caused by lack of incoordination between the source of power and its expression. They are limitations to nothing, imitations of something as yet unknown.

Impulse—Indicative of power, which could not exist if not expressed.

Impression—Inculcation received from without. Touch, sight, hearing, smell, taste, direction, etc., make imprints at peripheral afferent nerve fibres.

Power is used where function, coming from the brain, is expressed. I know of no physical function necessary to main-

tain life, but is controlled by impulse, followed by molecular motion. Protoplasmic movements are put into effect by mental impulses—energy promoters—making fundamental action a necessity and simple.

The mental knowledge of physical conditions is received by impressions in the brain, and there interpreted according to quality and quantity. Strength is not necessary to have vibration; it is the response which designates force, and vibration is the sequence.

Physiologies teach that everything passing towards *or from* "centers," through nerves are impulses. Chiropractors make a distinction between the outgoing and vice versa.

By the term "Nerve Impulse" is commonly understood a vague something which passes through nerves. Whence, where it comes from, goes to or does, is little understood by medical or Osteopathic schools. They teach that impulses go to and start from plexuses, nerve centers and division of the spinal cord. Beyond this is deep water and for fear of drowning, refuse to get their feet wet. Thus *The P. S. C.* had no precedent to follow, its foundation was new—its superstructure demanded materials accordingly.

The brain is the center of all nerve fibres, hence all that which passes outward through and uses the nerves as a conveyor is mental impulse—nerve impulse being misnamed. The nerve does not make, but acts in the capacity of a carrier—transmitter. Impulses must be named according to the place of origin, the same as the material secretions, viz.: Pancreatic Juice or Spleenic Fluid.

Mental impulse adds another term, with a broader meaning to *The P. S. C.* nomenclature, and will supplant nerve impulse which will not be known except as another superstitious misnomer. How long will it take Osteopaths to copy this idea? Watch their literature.

Mental Impulse is that power which leaves the brain en route for the various stations throughout the body. Mental impressions are all those vibrations en route *for* the brain. The distinction exists between direction, as the two are not counterparts in quantity, quality or speed, therefore, the above classification.

What is in a name? They are and have been used for thousands of years by medical men who know nothing of the cause of disease. Look at the combined colossal knowledge and the thousands of treatments of all schools, including Osteopathy, and what have we? Chaos! Chiropractic supplants this endless squabble over detail, with a knowledge of cause, immaterial of combinations that may ensue. Forget the combinations, forget names and still the Chiropractor is safe, for he knows *cause*. Why name effects? While you are tampering with and treating those, the Chiropractor will rush in, adjust cause, and get all credit for having returned coordination. It will be quickly seen

that he who has a specific cause of disease and a thorough knowledge of how to adjust it, will, in the future, be the man of the hour.

Therapeutical writers (including Osteopaths) refer to "phenomena" of physical functions. Why? They are unusual, strange or unaccountable. The knowledge of the whys and wherefores is absent; trying to grasp sunbeams at the wrong end. Without intelligent acquirements of Innate energy manifested by mental impulse, required to make functions possible. I can readily see how and why such continues to be "phenomena." *The Philosophy of Chiropractic* covers all points so thoroughly that they cease to exist under that name, for a specific, pure and unadulterated Chiropractor accounts for each and every action, explaining the physiology of each move or step from birth to death; a thing no collection of sciences, under one common head, previous to this, has accomplished.

Simplify, do not mystify, is exemplified in all *P. S. C.* teachings. We have succeeded in building a philosophical mansion, huge in proportions, grand in external appearances and with all, simplified grandeur in detail. We can say without contradiction that *P. S. C.* Chiropractic supersedes and is setting a new pace. By studying some of the ideas embraced the reader will slightly grasp the greatness of *The Philosophy of Chiropractic*.

THERAPEUTICS IS OF SUPERSTITIOUS ORIGIN.

It originated in a misdirected, unenlightened, religious feeling; a belief in magic, charms, omens and prognostics; because of a lack of acquaintance with Nature's laws. It embraces an excessive reverence for, or fear of, that which is unknown or mysterious; the origin and curing of diseases attributed to necromancy, the black art; they were thought to be controlled by an invisible intelligence outside of the afflicted, therefore, conjurers learned to practice the magic art which, in a modified form, is continued by practitioners of medicine; instead of alchemy and conjurers, injury by witchcraft, curing diseases by the assistance of supernatural beings; we have chemists and physicians, treating diseases from outside influence, a mastery of secret forces, already existing.

As to what is, and is not thought to be superstitious, depends wholly upon one's method of reasoning, which is moulded by education. That which appears reasonable or superstitious to one may not seem so to another. Possibly none of us are entirely free of it, although it is easy to observe in others.

There is no line of education that is so permeated with superstition as that of curing diseases. The words "cure and heal," so strenuously guarded by medical men, are of superstition, rightfully belong to them, and should not be used by Chiropractors.

Some states make it a crime for doctors to make use of them unless licensed to do so.

"To cure or heal" is not Chiropractic. The curing of disease and the healing of wounds have always been done by magic. This assistance was, and is, supposed to come from supernatural beings, or a mastery of secret forces inherent in the agent or means used; known as sorcery, witchcraft, necromancy, conjuration, enchantment and incantations.

My mother was as full of reverence for the unknown mysterious agent of superior power as an egg is of meat. She, of course, did not see it thus. No one thinks themselves superstitious. She could sit for hours relating incidents which occurred in her childhood of persons who were bewitched, informing us how the doctor broke the spell by incantations. On one occasion the M. D. directed them to make a representation of the suspected witch out of dough, which he ordered burned in the fireplace. She would become animated with relating what a time they had keeping the image in the fire, which would crack and snap, throwing the dough out of the flames and on the hearth. They finally succeeded in holding it until burned, which broke the spell, relieving the girl of her affliction. This is one of many which was conscientiously believed in and told by her. That was near a century ago. Many readers will be reminded of similar tales of witchcraft. While most M. D.'s have outgrown this depth of superstition, they find much of it among those whom they are called to visit.

Some persons may question my statement in regard to M. D.'s believing in magic, the power of some to put a spell, which we name disease, upon others; in charms to cure; inherent power of remedial agents; amulets as guards against evil; the ability a few possess of throwing off the ascendancy gained by sorcery or witchcraft. I shall quote a few words from medical books, as illustrative and proof of the above. Where superstition ends and reason is fully enthroned, depends upon the education of the individual doing the thinking. Before I get through I expect to show that all remedies for the treatment of effects are of superstitious origin.

I am not discussing the efficacy nor doubting the honesty of those who believe in remedies, regardless of their depth in sorcery; they frequently give relief, even to curing the afflicted. Remedies of every description for any purpose whatever are but woof-filling for witchcraft—warp; they are different patterns of cloth when in the same loom of superstition. Charms among the laity are in common use today; very often they are given the credit of curing at the disadvantage of the attending M. D. I desire to draw the distinguishing line between Nature and superstition, cause and effect, adjusting and treating.

For King's Evil, commonly known as scrofula. "Doctress Anne Pounsbery, who departed this life December 11, 1813, aged

seventy-three years," prescribed, "Take the legs of a toad. Bake and grind them to powder with pestle and mortar. Place the powder in a bag around the neck of the sufferer." I presume that relief and failure followed this prescription, as much so as many remedies used today.

From "The New London Dispensatory, by William Salmon, Professor of Physic." Date MDCCXVI, I quote: "Translated into English for the Publick good, and fitted to the whole Art of Healing." The reader will have to replace many f's by an s, for I will copy as printed 200 years ago.

On page 171. "Carbon Humanus takes pains away caused by witchcraft." Page 172. "Salt of Urine. It expels Ill Humors by Stool, Sweat and Urine. Preserves from the Stone, taken once a month before the New Moon, and cures consumption wonderfully." Page 176. "The Elk. The Hoof is a specific Remedy against Epilepsies. Outwardly you may put it in a ring to be worn on the Ring Finger, so as it may touch the Skin; or a piece of the Hoof may be hung about the neck, or hung in the left Ear." Page 179. Referring to the India ox. "The Bugil. It is a black creature almost like an Ox, but greater and much fiercer. The Horns worn in a Ring, they help the Cramp." Page 180. "A Toad. They are Hung by the Neck in the Air, till they are through dry, and then kept for use. The Afhes hung about the Neck (As an Amulet) cures pissing a Bed, or the not holding of the Water." Same page. "A Camel. The Hair of the Tail twisted together and worn as an Amulet cures Quartans." Quartans are fevers. Page 184. "The Cat. Dung with mustard and Vinegar, hung about the Neck with an Owl's Claw (as an Amulet) it cures Quartans." Page 186. "The Chameleon. The Liver dissolves Love. The Dung mixed with the Urine of an Ape, causes hatred. The Heart wrapped up in fhorn black Wool, and worn, cures Quartans by way of Amulet." Page 186. "The Hyena. The Sinews drank in Renifh or Canary with Olibanum causes fruitfulness in those that have been disabled by Witchcraft." Page 226. "The Head of the Viper is used as an Amulet, to be hung about the Neck, to cure a Quinsie."

In "Bate's Dispensatory," date 1694. "Translated from the Second Edition of the Latin Copy," on page 897, is a prescription that to me looks superstitious, but William Salmon, M. D., Professor of Physics, thought it was all right, for he says, it was one of "His Choice and Select Recipes." Dr. Salmon held Dr. Bate in high esteem, as evidenced by the first paragraph of the preface, which says, "The original author of this book was the Eminent and Learned Dr. Bate, a Man who in his Station has been Physician to Two Kings of England, and a Protector; and such Approved Skill in his Profession that to make any Descants thereon, would be to draw a Vail over his Lustre, and blemish that Excellency, which in this following Work, gives a convincing Proof, that he was one of the greatest Masters of his Art in the Universe."

This prescription is prefaced by the medical character "R" still used by all medical men of every school, when writing prescriptions or formulas for making combinations, or mixtures of materials to be used as medicine. Webster says of this sign: "This character is reputed to have been originally the symbol of Jupiter, it was placed at the top of a formula to propitiate the king of gods, that the compound might act favorably." Dunglison's Dictionary of Medical Science and Dictionary of Medicines states: "Originally it was the sign of Jupiter, and was placed at the top of a formula to propitiate the king of the gods, that the compound might act favorably." This insignia of witchcraft is yet used by all the medical fraternity. It is peculiar that this sign or superstition is so universally used by physicians in prefacing their prescriptions. They actually implore Jupiter, the king of gods, to make this, their remedy, act favorably for a certain ailment. Just think of physicians praying to Jupiter to bless their practice.

Dr. Bate appropriately names this compound "The Sympathetic Ointment." It is composed of "Oil of Rofes, Linfeed-Oil, Man's Greafe, Mofs of a Man's Skull, Kill'd by a violent death. Mummy Man's blood, mix and make an Ointment, S. A." In this and other mixtures, where a part or the whole of a human is used as medicine—they are always of a man, he being preferred to a woman, for the reason the man is stronger, therefore, would make the most powerful medicine. Observe that this prescription is appended with "S. A.," which means, "According to Art." It required a systematic knowledge and skill to compound, calcinate, dissolve, infuse, separate, extract, triturate, sublimate, ferment, fixate, imbibe, abstract, and distil men, beasts, birds, fish, snakes, worms, insects, minerals, herbs, fruits, seeds and gums so that their Jupiter god would be pleased to favor the preparation and make it suitable as a remedy; it was the business of an educated licensed apothecary, pharmaceutical chemist, to prepare these mixtures so that they might be efficacious.

Dr. Bate tells us how to use this "Smypathetic Ointment." He says, "By this Ointment all wounds are healed; anointing the Inftrument by which the Wound was made, once a day, every day, if the Wound be great, otherwife, if the Wound be fmall, once every fecond or third day may fuffice. The Weapon is to be kept wrapt up in a clean Linnen Cloth, and in a place not too hot, left the Patient fuffers thereby."

Not only different portions, but often the whole body of a human was used for medicine. From pages 173 to 174 of "The New London Difpenfatory," I quote two recipes out of the many. "Take the carcafe of a young man (fome fay red hair'd), not dying of a defeafe, but killed; let it lie 24 Hours in clear Water in the Air, cut the flefh in pieces, to which add powder of Myrrh, and a little Aloes; Imbibe it 24 Hours in the Spirit of Wine and Turpentine, take it out, hang it up twelve Hours in frefh Spirit,

then hang up the pieces in a dry Air, and a shady place, fo will they dry and not ftink."

"Aqua Divina, Divine Water. Take the whole Carcafe of a Man violently killed with the Intrails, cut in pieces and mix them; diftil it from a Retort twice or thrice. It is reported to have a magic power."

"Violently killed." It would not do to take one who had perished by disease, for fear of contagion; but on the contrary, a man who had died, well, stout, and hearty, would bestow health upon those who used the decoctions, magisteries, elixirs, infusions, triturations, extracts, powders and tinctures made from the deceased, and used as medicine. Such was and is Grandfather Allopath.

Diseases were cured by remedial means, which were supposed to subdue, or remove the intruder. Witchcraft was used, amulets worn, and compounds made of every conceivable substance for the purpose of warding off and treating evil effects, which were produced by some outside influence. M. D.'s, then and now, recognize effects put on, or in, by something extrinsic of man, therefore, know nothing in regard to adjusting displacements, which cause maladies, or to use a scriptural term, afflictions. When will they learn from Nature, and find the cause of ailments in the one affected?

On page 199 of Dr. William Salmon's wonderful collection of recipes, I find "King-fifher. Flefh roasted and eaten is affirmed by fome to help fuch as we are poffeffed. The Heart dried and hung about the Neck of a Child cures the Spilepfy." Page 194. "Skink (a kind of crocodile). In India it is ufed againft Elephantiafis. The Heart is worn in Black Wool, as an Amulet, againft Quartans." Please notice, that the skink is used against thickening of the skin and tissue; also against fevers. No doubt, the thickened fissured hide of the crocodile caused them to think of it as a remedy for thicqened cuticles. It will be observed that many remedies were reasoned out thus. M. D.'s of all ages have used agents against any and all ailments. The disease maker's fraud, poisoning well people by vaccine virus, in order to, as Samuel Frederick Gray, Lecturer on Materia Medica, Pharmaceutical Chemist, puts it in his treatise on Pharmacology, date 1824, "Used to communicate the disease under favorable circumstances instead of hazarding its being acquired when circumstances are unfavorable." Here disease is used as a remedy against taking smallpox when unfavorable. This delusive scheme has put millions of dollars of revenue in the coffers of the tariff protectionists. Those who prescribed amulets did so to guard against evils, which included di

Page 205. "The Blackbird. The Head with the Feet of an Hare, are ufed as an Amulet to make men bold and courageous."

Page 208. "The Houpe. The eye worn as an Amulet, cures Leprofy." Page 211. "Dog-fifh. The teeth fet in Silver are

worn as an Amulet to caufe breeding of the Teeth." Page 229. "The Spider being made into a Plafter, and laid to the Wrists and Temples, caures Agues, chiefly Quartans, so alfo if they are put into a Nut fhell and hung about the neck." Page 223. "The Cricket. The whole Fly hung about the Neck as an Amulet, helps Quartans." Page 234. "The Locuft. It is an infect which has a Head like a Horfe, fix Legs and Wings, being of divers Colours. Hunt about the Neck, they cure Quartans." Page 363. "The Chalcedony. It is both Male and Female, and is commended (only ufed as an Amulet) against Hoarfenefs and lofs of Voice." Page 367. "Jews-Stone. It is faid to be both Male and Female. Some wear it about the Neck as an Amulet againft Frights in Children, and to prevent Abortion, but it ought to be Remov'd at the time of Delivery, left it hinder the Birth." Page 369. "The Nephritic Stone. It expells the Stone and Gravel, being tyed to the Arm, and to expel Gravel, the which it cures, being tyed to the Arm or Hip, or worn in Bracelets about the Neck. Tyed to the Thigh it facilitates Delivery." Same page. "The Onyx Stone. This Stone worn as an Amulet, frightens and fortifies the Heart, and repreffeth Phantasms." Page 371. "The Sapphire. There are Males and Females. It comforts and good Colour, and refifts Melancholy and Witchcraft. Applied to the Pulfes it cures Agues."

Cures were not the result of adjustments, but of a magic force. They were thought miraculous and not natural. The M. D. today, outside of surgery, looks upon the results of remedies as wonderful and the change as hyperphysical.

Take notice that the fancied male and female inherent intelligence in the above stones had the ability of expelling evils or diseases and resisting witchcraft. The same principle guides the physician in selecting his remedial agents to overcome disorders; fearing that he may forget to ask his god Jupiter to bless the preparation, he has the symbol "R" printed at the left hand upper corner of his prescription blank. Remedies are thought to have the power of dissolving, removing, drawing, prevailing, expelling, resisting, cooling, heating, strengthening, or weakening; in fact, they are anticipated to act on and do for the afflicted as the doctor and Jupiter may direct. It is no wonder that the medical profession believe in suggestion and advocate it as an essential part of their treatment.

If dentists were as anxious for specifics they could find some highly recommended among Dr. Salmon's prescriptions. On pages 177, 187, 213, 223, 184 and 234 I quote: "The Ram. The Brain mixed with Honey, and annointed on the Gums, caufes Children to breed their Teeth eafily." "A Horfe or Mare. The Teeth which are firft faft (as an Amulet) help Children to breed their Teeth, and the Toothach." "Sea Dragon. The Bones Cure the Tooth-ach by Scarification with them." "The Neuets. The powder of 'em rubb'd on makes Teeth fall out with-

out Pain." "Otter or Beaver. Castoreum put into the Ear, it cures Deafness and the Tooth-ach, especially if held in the Mouth. In fits, apply to the Nose, or bind it under the Armhole, or to the Navel; or take the Oil, Tincture, or Extract of it inwardly; sometimes also the Kidneys are put into ab ladder and dried, and fold for it, but 'tis a Cheat." "Earth-worm. The Afhes glue together broken Bones, and draw things out of the Flefh; are good againft the Bitings of Serpents and Scorpions; put into a hollow Tooth, they cure the Tooth-ache."

Dr. Salmon refers to an aching tooth because of its being hollow and decayed. Such is not the cause. The teeth of some persons decay, even to the gums, without an ache. Dentists know that sound teeth often ache. It remained for a Chiropractor to demonstrate that all sensations, including toothache, were in nerves; made so because of impingement on the maxillary branch of the "fifth cranial nerve." Cervical vertebræ displaced, occlude foramina, pinch the outgrowing nerves, causing pain. Why not replace the vertebra, remove the pressure, free the nerve, and restore it to its normal condition?

M. D.'s have always been anxious to possess a specific; as Dunglison puts it, "*A remedial agent to which is attributed the special property of removing some particular disease*; examples are mercury in syphilis and quinine in malaria." The M. D.'s of 200 years ago had many remedies, thousands of them, which were specific; they have culled, until now they have less than a dozen. As they advance toward Nature and away from a belief in the superior magical powers of remedial agents, grow in knowledge, free themselves of superstition, they continue to drop those which were believed to possess inherent intrinsic value, an antipathy for certain ailments. The belief that the sick are possessed of evil, bewitched by some sorcerer, hoodooed by bad luck, is disbelieved in proportion as we accept Nature's laws. The physician of to-day who studies Nature more and remedies less, will seek to adjust causes and discontinue to treat effects.

Marvelous qualities have always been attributed to finger rings. Their power derived from mystic words, cabalistic devices, or their settings. Some were believed to be medicinal and used to heal the ills of mankind. Those blessed by Royal Majesties were given the credit of curing epilepsy and the cramp. The touch of kings cured scrofula.

I have as good reason to believe that one agent contained as much healing power (charm virtue) as another. Everything imaginable has been by some held sacred or unholy, and thought to omen good or bad luck for the possessor.

The following formulas contain a few of the "remedial agents to which is attributed the special property of removing some particular disease."

"Bate's Difpenfatory." Date 1694. Page 13. "Water of Pifmires. Of the larger Pifmires (gathered in May or June);

Honey: Spring-Water: mix and distil according to Art. Dose one spoonful. It provokes vomiting, and cures Tertian Agues." Medical remedies given internal or external, are for the purpose of "provoking" vomiting, purging; to drive a rash in or out; to dry a running sore or to provoke it to discharging freely; to irritate one portion in order to draw the inflammation (heat) from another. The principle of inherent witchcraft is believed to exist in, or is transmuted to the agent used so that it acts intelligently "to a wonder." Page 14. "Live Swallows, number 40; Castoreum: White-wine: distil. It prevails admirably in cure of Epilepsy."

Dunglison says: Castoreum is a "Peculiar concrete matter found in follicles between the anus and the external genitals of the beaver in both sexes; the odor is strong, unpleasant, and peculiar; taste bitter, sub-acid; antispasmodic and nervine." The medical practitioners are leaving out many of the most obnoxious ingredients used by their forerunners; those retained are believed to *contain some virtue as a curative agent*. The witchcraft principle of two centuries ago, and that of today, are the same when prescribing and compounding drugs; they are presumed to be restorative and life-giving; or counteracting, prevailing dispelling and driving out the intruder, or evil effects.

"Samuel Frederick Gray, lecturer on the Materia Medica, Pharmaceutical Chemistry and Botany," issued the third edition on Pharmacology. Date 1824. It contains hundreds of remedies, many of which are specifics, of which I will copy three. Page 242. "Tabasheer. A stony concretion formed in the joints of the bamboo cane. Used in diseases arising from obstructions." Webster says: "This silica is highly valued in the East Indies as a medicine for the use of bilious vomitings, bloody flux, piles and various other diseases." Some thinker observed this concretion in the obstructed joint of the cane, therefore reasoned along the line of superstition that it ought to be good for impediments in the human body. Same page. "Calculus Humanus. Used in obstructions, and in preventing the growth of calculi." The same mode of thinking, although a step in advance of witchcraft, yet born of superstition.

This moloch fanaticism has used the blood, fat, dung and urine of almost every known creature, to rid sufferers of maladies. Its devotees always had their peculiar reasons for so doing. Remember that methods of consideration depend on educational training. That which appears rational to one may not seem so to another. Remedies, like fashions, are always changing, yet a few of the many remedial agents, which were thought to have some innate virtue hidden in their precious substances, are retained.

In Holy Writ we read, "The life of all flesh is the blood." Preparations made of blood are believed to give life. Only a few years ago, there was a craze for blood drinking. Consump-

tives were eagerly swallowing large quantities of the flesh warm blood of slaughtered cattle. The medical profession used it in many of their compounds. These pharmaceutical mixtures are supplied from extensive manufactories; one of which is located in New York. Their advertisement reads like the magisterial beliefs of two hundred years ago.

Let us read one. "Oppose Disease with the very power that will prevent or overcome it—live blood.

"Bovine is the life arterial blood of the sturdy bullock. It is antiseptically prepared by cold process, and sterilized. It makes new and enriched blood quicker and better than any other known agent. It is Nature's Greatest Auxiliary, and a most efficient aid to any form of medication.

"Use it in Anemia, Consumption, Dyspepsia, and all debilitated and impoverished conditions. Use it topically on chronic ulcers, lupus, fistula, burns, and bed sores. Use it in obstetrical practice, and note magical and healthy healing, and prompt abolishment of pus, stench and pain."

The above, located at 75 W. Houston Street, New York, has all the ear-marks of remedies in vogue two hundred years ago. *Oppose* disease with *power* that will *overcome* it. Thus has the medical profession always reasoned and boasted of their battles with disease. How different when disabilities are viewed from natural methods of adjusting causes; instead of superstitiously treating effects with remedies. All functions are performed by nerves; they are the life of the body, to heat the body is one of their acts. Anemia, consumption and dyspepsia are abnormal conditions, because of functions improperly performed. If nerves are free to act natural, then all duties are executed properly in normal amount. Nerve impingement is the cause of functions being abnormally accomplished, either in too great a degree of a lack of. Nerve action can only be interfered with by impingement. Pressure can solely be brot to bear upon nerves by *hard* tissue of bones, and only at joints between the articulating surfaces. If bones are slightly displaced, their articulating surfaces luxated, nerves are pinched, their action deranged thereby. If so, why not replace the displaced bones and free the nerves? Why try to overcome disease by opposing it with the power of dead blood?

Ulcers, lupus, fistula, and bed sores are results of abnormal nerve action. Why not adjust the displaced parts of the skeletal frame and allow the nerves to perform their work without hindrance?

Who can tell the difference in quality or value, as a remedy, of arterial and venous blood? Does not one contain as much nutriment as the other? The nutrition assimilated is all there is of it. The human economy cannot assimilate any more nutriment out of the blood than there is food in it. Observe that this blood is from the "sturdy bullock;" that from steers and

cows would be considered inferior, because of less strength. This is a continuation of the same superstitious medical reasoning of centuries ago, when Dr. William Salmon said, "The Water coming out of the Mouth of the Stone Horse after drinking, will cure Barrenness, if often drunk."

"Note magical healing." These manufacturers know how to cater to the M. D.s who are looking after chemical combinations, which *contain magical hidden wisdom*, and act in a miraculous manner. This includes the imagined mastery of secret forces, which superstitious remedies are said to contain. Chemists are believed to be masters of the transmutation art. "Abolishment." What a magic force dead blood is that to have put an end to, wipe out, do wholly away with pain and dead matter—pus. Surprising, wonderful, that people of this enlightened age will use such stuff.

Any portion of an animal or vegetable, when eaten, contains only the nutriment we are able to absorb and assimilate by digestion. That the consumption of muscles would give muscular strength; the eating of brains, intelligence; blood, animation and color to our skin; dung, good digestion, because of its being digested; would not be worth noticing, were it not that such reasoning has been always that of the medical profession.

The above advertisement, copied from Medical Progress (?) of July, 1901, shows the conjectured mastery of hidden secret forces (superstition) which all remedies are said to contain. It gives the distinguishing marks of identification of its origin, viz: witchcraft, conjuration, sorcery, necromancy and incantations.

From the foregoing quotations, it might be that that amulets were always connected with all medical recipes. Such is not the case, altho there may be more benefit from the always present assured confidences given by continued suggestion of the charm against evil, than in the nutritive quality of the drug or mixture, as will be seen from the following, although of the same fanatical source:

Page 209. "The Eel. The bloody end of the head, if it touches Warts, and is afterward buried, takes them away." Page 218. "The Water Frog. Laid alive to a Carbuncle or Plague Sore, till it dye, it draws out the Poison, which you may repeat, till the Frog may be applied and live; held in the hand they cure Fevers. A live Frog laid to the Belly of one that has Cholic, will draw the Difeafe from the Sick into the felf. The Heart applied to the Back Bone in a Fever or Ague, cures it, but some apply it to the Heart Stomach; you may do both. Diftilled Water from the whole live Frog, taken in the beginning of April, has all the Virtues of the Spawn aforesaid." Page 189. "A Lion. The Blood befmeared on a Cancer it cures it." Page 191. "A Mule. The Heart,

Liver, Kidneys, Womb, Stones, and Blood, caufe Barrennefs, being taken inwardly." Page 234. "Gally-worm. The Afhes of thofe in Cellars wonderfully provoke Urine. Their Blood with the Juice of Hog Lice, takes away white fpots in the Eye; fome of them are fmooth, others hairy. They are a fhort kind of a Scholopenders, exceeding in number of Feet all other Infects." Page 181. "The Gall of a black Puppy mixt with Vinegar, or given in powder, cures the Epilepfy to a wonder. It is used by Magicians in the way of an Amulet." Page 185. "Take Deers Blood putrify it ten Days, diftil in Sand gradually, firft with a foft Fire, then with ftronger in a Retort, fo will you have a noble Balfam. This cures the Gout in a wonderful manner." Page 186. "The Elephant. The Blood mixt with the Afhes of a Weafel, helps the Elephantiafis, as alfo Fluxations and Rheumatifms." Page 9. "Henbane. Boil'd in Vinegar, and held in the Mouth, they eafe the Tooth-ache; brui'd and laid Plaite-wife upon any part pain'd with the Gout, gathering it before Sun-fet, not touching it, but digging it out with a bone." Page 377. "The magiftery of Coral is reported to have the Virtues of Coral; but fimple legigated Coral is a hundred times before it. For the Virtues of Coral is to deftroy Acids and unnatured ferments, (which are the caufe of moft Difeafes:) If once its ankalous matter be fattfied, and weakened by an external Agent, before it comes within the Body. Reason tells us it will be impoffible for it to act at all within; a thing can be but full, but being full, 'twill hold no more." Page 190. "A Hare. The Rennet is good againft poifon, and diffolves Blood curdeled or congealed in the Body, cures the Epilepfy. It diffolves thick humors, and coagulates thin or liquid, for all forts of Rennet has a certain fiery Faculty, difjoining things heterogeneous, and that in a fmall Quantity, as is apparent in making a Cheefe, where, in a very little, it communicates its Quality to a great Quantity. Hence it is apparent, that the Rennet of all things both ftops and diffolves." This is Allopathic reasoning. The ancient phyfician believed in four humours: blood, phlegm, yellow and black bile. See "Commentaries upon Boerhaave's aphorifms." Date MDCCLXXVII. Page 174. "Balfam of Mummy. It is reputed to have a magnetic Power; if to this Water, you put a few Drops of the Blood of a fick Perfon, and let them on a Fire, and they mix, the fick recovers; if not, the Sick dies for want of Blood, take the Urine in a larger quantity." This pharmaceutical preparation from the marrow of bones, ought to be endowed with extraordinary power, fufficient to make a mofsbach diagnosis that would equal any therapeutical remedies. Page 169. "To cure Confumtion, take the Hair and Nails of the Patient, cut them fmall, and put them in a Hole in the Root of a Cherry Tree, and then "ftop" it with clay. To cure Quartans and the Gout, take the faid Hair and Nails cut fmall, and either give them to Birds in a roasted Egg, or put them into a Hole bored into the Body of an

Oak Tree or Plum Tree, stopping up the Hole with a Peg of the fame Tree, or elfe mixe them with wax, and ftitch it to a live Crab, cafting it into the River again." This remedy is prepared with the medical *symbol* "R" for the purpose of asking god Jupiter to make it competent. Don't this jar your mother's preserves? Yet, today physicians find among their patients many remedies and cures equal to this. They have no reason to complain, for they are using similar formulas for the same purpose, with the same end in view.

John Arderne, of Newark upon Trent, England, a famous and experienced Chirurgical in the reign of Edward the Third, King of England, 1370; made an ointment named, "Power of Scabious" of hog's grease and juice of green scabious. After giving the mode of preparation which requires nine handlings, occupying 119 days, he says, "After this manner you may have the Power of any herb whatsoever. This ointment is an excellent thing against Scabs, Itch, Mange, Carbuncles, Buboës, Plague Sores, (which cures in three or four days, if mixed with a little Camphor, Mophew, Freckles, Tettars, Ringworms, while Films and Pearls growing over the eyes, Wounds, Ulcers, (venereal or not) Tumors, Biles, Pushes and the like. It is also Prevalent against obstructions of the Lungs, the Stomach being anointed therewith."

The above, although over 600 years old, has the same distinguishing marks of identification as those remedies of later date. If some M. D. desires a copy of this valuable remedy and the method of transmutation he can have it for the asking. It is too lengthy to insert here. Its age ought to commend it. This ointment had a *power* which was transmitted to it by four months' manipulating. It was used against all manner of evils which disfigured the skin. It *prevailed against* the evil when it *obstructed* the lungs.

Following is a copy of a firm in Chicago making therapeutical remedies. Doctors are using these superstitious remedial agents: they would use anything which treats effects.

"The New Animals Therapy. Formula. Following ingredients taken from six months old goats; contents of lymphatic glands, ducts, etc.; extracts from lymphatic glands, cerebrum, medulla, cord and testicles, also semen from 2-year-old bulls' testicles. All ingredients taken before or immediately after death, and kept indefinitely in an active condition." The "extracts" are really *solutions* of the structures named.

These manufactories supply drug stores and physicians with animal extracts, and they furnish them to the public.

Therapy. Therapeutics. "That part of medical science which treats of the discovery and application of remedies for disease." I have only copied a few of the curative agents of "medical science," sufficient, however, for my purpose. I have over 2,000 pages of "Choice and Select Recipes," each one

a specific for certain ailments. Science is a knowledge of principles and causes; ascertained truth and facts. What knowledge has "medical science" of truth or facts in regard to origin and causes of disease? Medical men are well versed in therapeutical remedies for the treatment of effects, means employed for the relief of disease. It is founded on superstition and insanely continued in practice. Their great trouble lies in "knowing so many things that ain't so." Chiropractic has dumped all branches of "medical science" overboard, for it is worse than useless to try to advance it by the usual method of substituting new remedies. The science of Chiropractic is that incongruous by physicians who give remedies to carry off disease by physic.

Webster says of "Heal. To remove or subdue; to cause to pass away; to cure; said of a disease or wound." Before the advent of Chiropractic all methods were therapeutical. They advocated force for the subduing and removal of the intruder; as tho disease was an intelligent evil. The most obnoxious materials have, therefore, been selected. Iodoform blunts the sensibility of the peripheral nerve terminations, relieves pain—treatment of effects, instead of adjusting the cause. By its disgusting odor it advertises the doctor, to the disadvantage of the patient and those within smelling distance, for rods around and hours after their absence. Asafetida; Devils dung; food of the gods; was prescribed as an amulet, hung about the neck, by doctors forty years ago to ward off disease; it is now in common use among the lower laity.

Sorcery and witchcraft; cure and heal; are two pairs of twins born of superstition. Two hundred years ago medical men believed in the former; today they have replaced them by the latter. They were born of the same parents, therefore belong to the same family, whom they resemble.

The Chicago chemist, who makes animal therapy, solutions and extracts, of seven parts, or organs, of goats and bulls, to cure less than a dozen diseases, is not in it, when compared with the chemist of 1716, who was able to utilize thirty-four different portions of those two animals, and make formulas to cure ninety-six diseases. The Chicago advertisement says that his animal therapy is "very efficient in the treatment of tuberculosis, chronic suppuration, ulceration, etc., The ancient chemist affirms, "The milk being long and largely taken every Day, it certainly cures Confumption. The Extract of Cows-Dung is good againft all Difeafes; inasmuch that fcarcely any Difeafe is able to stand before it, being continually used as a diet." Excuse me, I would prefer Chiropractic adjustments.

On page 179, Dr. Salmon gives his reason for using dung. He says, "It is of a cleafing Faculty, temperate in Quality, and a great anodyne, and ufed by a very good Lady fuccrefffully againft the Gout, and the cure of all other difeafes. The reafon is

apparent from the parts of which it is composed; being digested by an exact natural (animal) heat."

Charms of all curative agents are founded upon a religious belief; they are supposed to contain magical power which restores those afflicted by the devil, or evil beings, back to health, as will be seen from the following, copied from Dunglison's Dictionary of Medical Science, date 1866, page 202:

For cramp. (Pepys.)

Cramp be thou faintless,
As our lady was sinless,
When she bore Jesus."

"For the foot when asleep. (Coleridge.)

Foot! foot! foot! is fast asleep!
Thumb! thumb! thumb! in spittle we steep;
Crosses three we make to ease us,
Two for the thieves, and one for Christ Jesus."

"For cramp in the leg. (Coleridge.)

The devil is tying a knot in my-leg!
Mark, Luke, and John, unloose it, I beg!—
Crosses three we make to ease us,
Two for the thieves, and one for Christ Jesus."

"For a burn. (Pepys.)

There came three angels out of the East;
The one brought fire, the other brought frost.
Out fire; in frost.
In the name of the Father and Son and holy Ghost.
Amen."

Another form of charm is given on page 21 of the same book.

"ABRACADABRA, the name of a Syrian idol, according to Selden. This word, when pronounced, and repeated in a certain form and a certain number of times, was supposed to have the power of curing fevers and preventing many diseases. It was figured on amulets and worn suspended around the neck," in the following form:

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A B R A C A D A B R A
  B R A C A D A B R A
    R A C A D A B R A
      A C A D A B R A
        C A D A B R A
          A D A B R A
            D A B R A
              A B R A
                B R A
                  R A
                    A

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Dunglison's Medical Dictionary, 1903, contains many remedies that are fully as superstitious as any which I have quoted. One-third of a page describing animal lymph, and how obtained, "Brown-Sequard elixir, a preparation made from testicular juice, presumed to have the power of restoring the enfeebled vital forces." This elixir is manufactured at 21 E. 14th St., New York City. The reader may take time to look up Ovariden, Ovarian extract, Ovariin, Ovarin, Testaden, Testes siccati, Testicular fluid, Testine, and the diseases for which they are used.

Chemistry was born of superstition, being an outgrowth of alchemy, an imaginary art which aimed to find the panacea, a universal remedy for disease. Alchemists assumed the miraculous power of transmutation; they led the way to modern chemistry. Medical science is science in superstition.

Ancient chemists were believed to change the nature and character of the material they handle, by transmutation, placing therein a miraculous power of resisting evil and dispelling ailments. The medical practice is permeated with superstition. How can it be otherwise? Health boards are continually boasting of their fights with disease. Osteopathic literature abounds with "Overcoming Disease." "Disease is an enemy, we have to combat it." "We need military schools; other schools have failed to batter down and take the forts of the enemy." "We came off the battle ground victorious." How can it be otherwise?

"Baron van Swieten, confellor and Firft Phyfician to their Majefties the Emperor and Empreſs of Germany; Perpetual Prefident of the College of Phyficians in Vienna; in a work published in 1776, "Concerning the Knowledge and cure of Difeafes," gives an explanation of pleuriſy. On page 28, he ſays, "The reaſon is evident; for the blood of a healthy perſon, drawn from a healthy vein into cold water, inſtantly concretes into threads of almoſt ſolid confidence." On page 24. "Pleurify has for its cauſe, everything that is difpoſed to generate an inflammation of another kind." Page 162. "Moreover, it will hereafter be made to appear that violent commotions of the mind produce an atrabiliary temperature of humors, which was lately in the preſent aphoriſm reckoned amongſt the cauſes of an hepatitis. It moſt frequently happens in traveling through deſert countries, or when a fright ſeizes upon a perſon from having ſeen a ſpectre or gholt."

On pages 174 and 37, he makes a ſtatement which no one can deny. "An hepatitis then terminates like an inflammation in the other vifera, either in health, in other diſeaſes, or in death." "A pleurify terminates either in a cure, in other diſeaſes, or in death. This is a circumſtance which a pleurify has in common with all other diſeaſes." Sure thing.

Van Helmont was born at Brussels, Germany, in 1577. He was an eminent chemiſt and ſurgeon; believed in the *mag-*

netic cure of wounds; placed the seat of the soul in the stomach "because when we hear bad news we lose our appetite." He was a student of Paracelsus, whose father was a physician and chemist; was born near Zurich, Switzerland, in 1493. He held that *disease had an actual existence*, and did not depend upon an excess, or a deficiency of bile, phlegm, or blood. He was professor of physic and surgery at Basel, and prescribed for all the great men of his day. He traveled in Asia and Africa, making cures by necromancy, divination and conjuration, which he claimed were specifics for certain diseases. He experimented in chemistry, on the medicinal virtues of metals, desiring to discover the philosopher's stone.

These eminent physicians were the predecessors of our present doctors of medicine. The former, as well as the latter, believed their remedies contained an inherent antipathy for certain diseases.

Using remedies to treat effects, named disease, whether by sorcery, drugs, manipulations, mental or physical, magnetic, or any other means, the agent employed is expected to impart some force that will overcome and make conditions unfavorable for the evil to continue to inhabit the human body. The object and principle involved in each method born of superstition, which aims to transmute the nature of any substance into a remedy, is just the same.

Exorcism includes several kinds of superstitious fabrics woven upon the same loom.

An exorciser is one who claims to stand in with the powers that control human ailments.

Unseen forces are thot to haunt our dwellings, afflict humanity and animals. For what purpose, and whether from a good or bad source, depends upon thon's education. Some think that the Good Lord afflicts a member of their family for thon's benefit, or some one of the household. The purpose may be to humble one or more, to restrain them from evil ways, or to bring back to the fold, embraced in their peculiar ideas, some erring soul. Others do not blame the Almighty, but the devil for their misfortunes and disabilities.

An exorcist uses thon's influence to appease the Lord; or by force cast out evil spirits or devils that torment the afflicted. This is done by conjuration, using a holy name in the form of a charm, faith cure, or Christian Science.

The mental healer, no matter by what name known, asserts that all diseased conditions are mental illusions superinduced by some outward evil influence.

Exorcism is the act of warding off or casting out evil, removing mental or physical ailments from one who is possessed, by invoking supernatural aid, or in the use of words used in a magical form, or by performing certain ceremonies; this is odiously named necromancy; popularly known as faith cure, or

Christian Science. To deliver from, or to purify one of evil influence, is to make them immune and protected from all harm.

In order that the reader may more fully comprehend the difference between superstitions, using remedies to treat effects; and Chiropractic, the adjusting of causes; cure and heal, and replacing displaced parts of the skeletal frame in proper relation to each other, so that nerves may perform their functions in a natural manner; I will relate one case.

C. H. Murphy, of Davenport, was brought in our office by J. S. Evans, D. D. S. Mr. Murphy was suffering with sciatic rheumatism, so much so that he walked with the greatest difficulty and much distress. I gave him one adjustment, replacing a lumbar vertebra, which took the pressure from the nerve, giving instant relief. His facial expression changed from that showing great distress to one of happiness. He was not backward in telling his friends what I had done for him. He had by some means wrenched his spine, slightly displaced a vertebra, partially closing the foramen, which pinched the nerve as it passed through the vertebral opening. The natural thing to do was to replace the slightly displaced vertebra, thereby freeing the nerve from impingement. That was Chiropractic.

Dunglison says: "The morbid anatomy and etiology of rheumatism remain doubtful. The causes commonly ascribed are the presence of lactic acid, uric acid, or excess of fibrin in the blood, cold and microorganisms." These presumed causes are but effects of malnutrition, functions abnormally performed.

Remedies used for rheumatism are innumerable, one about as good as another, if not better. They are prescribed for the treatment of effects, whether it be a buckeye or potato carried in the pocket of the "afflicted," medical, magnetic, mental, baths, electricity, or osteopathy. The originator of the latter says, on page 130 of his book on that science "Rheumatism is caused by gas exhaustion from the joints, electric heat and friction following." Wherein is there any resemblance between Osteopathy and Chiropractic?

One hundred years hence, remedies will not be used in general; causes will be adjusted instead.

Chiropractors look upon all vertebrate animals as sensitive nerve machines. Innate intelligence performs all the functions of the body, in man or beast, by and through nerves, whether normal or abnormal, or in what degree. If nerves are free to act in a natural manner, then we have health. Superstition places drugs in the feed boxes of horses, and the drinking water of fowls to ward off disease.

Chiropractors adjust causes, all other methods treat effects. Causes can only be adjusted; effects can only be treated. We cannot treat causes, nor adjust effects.

By adjusting the bony framework, which supports the soft parts of a vertebrate animal, whether man, beast or bird, we

put to right any displaced joint, the only possible place where nerves can be impinged. Doing this is no more treating than it would be to replace the displaced parts of a watch or engine.

Chiropractic claims no kin to any of the methods which treat effects, nor does it need their assistance.

Chiropractic has grown by its own expansion. It has opened new fields for investigation. The progress already made is but the beginning of greater achievements. The discovery of the principles underlying this science will put a keener edge to the discontent of superstitious methods; conditions which can easily be bettered. It may bring revolutionary agitation and imprisonment, but wisdom will keep pace with knowledge and the intellectual development of this, the grandest and greatest discovery ever made for the betterment of mankind.

ORTHOPEDIC SURGERY AND ITS COUNTERFEIT "MODERNIZED CHIROPRACTIC."

To know what the above subjects are it is necessary to show the resemblance of one to the other. I shall quote the authorities upon Orthopedical Surgery in *The P. S. C.* library and close with the assimilie. I shall prove that the attempted "Modernizing" of Chiropractic was simply adding that which has existed as a distinct science for hundreds of years. Instead of advancing its interests, they have retraced into the medical path that which Chiropractic is fighting to shed. Instead of adding *new* ideas, *they have retrograded.*

Each author will be taken singly, giving those parts which bear upon these questions. Bear in mind following questions in reading each:

- What is Orthopedic Surgery?
- How old is it?
- Is this a branch of surgery?
- Is it mechanical or manual surgery?
- Does it require previous surgery?
- What are some of its principles and how applied?
- For what diseases is this used?
- What is "Modernized Chiropractic"?
- What is the object of counterfeiting?
- What is Chiropractic Orthopedy?

In *Essays on Orthopedic Surgery*, by Newton M. Schaffer, M. D., we find the following. "It is the aim of the author to give a short sketch of *what orthopedic surgery* is today, and what it demands from those who enter upon its study and practice, for orthopedic surgery may now be ranked among the growing and necessary specialties."

Dr. Schaffer defines Orthopedic Surgery. "That department of general surgery which includes *the mechanical treatment* of

chronic and progressive deformities, for the proper treatment of which *specially devised apparatus* is necessary.

"Orthopedic surgery is placed, by this act, upon the same plane with the other special branches of medicine and surgery."

Orthopedic surgery is that department of general surgery which includes *the mechanical* and operative *treatment* of chronic and progressive deformities, for the proper *treatment* of which *specially devised apparatus* is necessary. I would modify this definition today so that it would read as follows: *Orthopedic surgery is that department of surgery* which includes the prevention, the *mechanical treatment*, and the operative *treatment* of includes the prevention, the *mechanical treatment*, and the oper-special forms of *apparatus* or *special mechanical* dressings are necessary.

"Operative surgery has its own place, and in orthopedic work that place should be second; and operative surgery should be used by orthopedists only as it supplements *mechanical-therapy*.

"Orthopedic surgery lies wholly within the domain of 'chronic surgery.'

"In order to be explicit, I again submit my definition of orthopedic surgery *as read before the Berlin Congress*. It is as follows: '*Orthopedic surgery is that department of surgery which includes the prevention, the mechanical treatment, and the operative treatment of chronic or progressive deformities, for the proper treatment of which special forms of apparatus or special mechanical dressings are necessary.*' The underlined words in this paragraph are in italics for emphasis.

"To the legitimate orthopedic surgeon, therefore, operative work takes a secondary and minor position, just as *the mechanical part takes by far the more important place*.

"In short, if *orthopedic surgery is to maintain its position among the specialties of medicine*, it must exist upon a *mechanical* foundation and its disciples must be experts in the use of *apparatus*.

"America has made by far the most important contributions to, at least the *mechanical* element in orthopedic surgery, and that the impetus given study of diseased joints and *spines* by American surgeons has influenced the *treatment* of these diseases and deformities throughout the world.

"Whether it was Brodie or Harris that first used or pointed out the value of *traction* in joint disease, or whether the possibility of successfully *treating* Pott's disease by the modern form of *apparatus*.

"It will probably not be disputed that Dr. H. G. Davis, formerly of New York, conferred a great benefit nupon humanity when he gave his perfected *apparatus* to the world, *embodying the principles of traction*.

"His plan and simple directions as to the *mechanical* principles involved in *treatment* are followed, more or less in detail, by almost all who *treat diseased spines* and joints today.

"After Davis's time, those making any pretense to the *treatment* of deformities classed joint and *spinal diseases* as orthopedic; their reputations have been due to a *mechanical* aptitude in the *treatment* of the diseases and deformities of the joints and *spine*. It is perhaps, in this latter field, that Bauer, Sayre, and Taylor appear to the greatest advantage, and the teachings of these gentlemen, all more or less inspired by Davis, form the foundation of much of the orthopedic surgery practiced in the U. S. today.

"And, *without a full discussion of the mechanical treatment of joint disease, no treatise on orthopedic surgery can now be called complete.*

"Whether, therefore, the condition be one of *lateral curvature, or spinal caries*, the indications are to be studied, and these indications are to be met from a pathological, anatomical, surgical and *mechanical* standpoint. To do this *the orthopedic surgeon must be fully informed upon* general medicine and *surgery* and must be prepared to prescribe his *apparatus* precisely as a general practitioner prescribes a remedy for disease.

"In order to satisfactorily carry out the system of prescribing *apparatus* for deformities, the instrument maker should be placed in the same category as the pharmacist, and should supply *apparatus* for deformities only upon a prescription, i. e., a carefully executed diagram of the *apparatus* needed.

"But *it requires education and a long systematic training to make a competent orthopedic surgeon*; and more: it requires a peculiar adaptability to successfully prosecute *the mechanical detail* in any case of orthopedic surgery, even under the best auspices. The orthopedic surgeon should be able as a matter of education, to make, if necessary, the *apparatus* which he needs.

"*The pathological conditions existing in many cases involving deformities are very serious, and should not be placed in the hands of ignorant or designing men.* They can not be successfully handled by even the general practitioner unless he has the time, the ability, the experience, and the patience *to follow a case in detail for perhaps two or three years.* Success comes only through a thorough mastery of *mechanical surgery*.

"Both before and after Stromeyer's time, however, *mechanic-therapy* was the fundamental part of the *treatment* of deformities.

"He also demonstrated the value of *traction apparatus* for overcoming the deformities occasioned by chronic articular lesions. The treatment of Pott's disease by means of the *antero-posterior spinal apparatus*, and the subject of the *mechanical treatment* of chronic joint and *spinal disease* received a marked degree of attention from the surgeons of the U. S. especially.

"In this field Lewis A. Sayre, and Dr. Chas Fayette Taylor became very conspicuous. They amplified Dr. Davis' *apparatus*, and devised many forms of *apparatus* for the *treatment* of chronic and progressive deformities, and under his able leadership the *treatment* of chronic and *spinal* disease became a *distinctive feature* of the *American School of Orthopedic Surgery*.

"Up to 1870, or thereabout, it would therefore appear that two *important* factors had aided in placing orthopedic surgery upon a satisfactory basis: * * * and secondly, the introduction of the *portative traction method of treatment* of chronic deformity, which after-*mechanical treatment* is oftentimes more important and essential than the cutting operation.

"The introduction of *traction* in the *treatment* of chronic joint disease.

"By the judicious use of *traction apparatus, portative or otherwise*, deformity can be prevented, and in many cases the disease producing the deformity can be arrested. *He gives no assurance of a complete cure*.

"Even at this day the general surgeon, as a rule, cares but little for orthopedic work, which requires much patient attention to *mechanical* detail; which demands special facilities for altering and modifying apparatus, and a *special training* and education *which very few surgeons have received*.

"It already represents a great deal, especially in the *mechanical treatment* of chronic joint and *spinal disease*.

"This is to be expected, for the author's greatest reputation is based upon his experience in the *treatment* of *joint* and *spinal* disease. The strength of his work, however, lies in its orthopedic part, or in the description of deformities and their *mechanical treatment*.

"In short, the orthopedic surgeon should take a step in *advance of the general surgeon*, and that *his education should include all that is necessary to make a general surgeon, before his study of mechanic-therapy is commenced*.

"Nor can one expect to equip himself as an orthopedic surgeon in a *short time*. After graduation, and a term of service as interne in a hospital, a course of study covering at least *five years* (including a wide clinical experience in dispensary and hospital work), *should be demanded* of those who expect to become orthopedic surgeons. Orthopedic surgery lies wholly within the domain of 'chronic' surgery.

"Still, the orthopedic surgeon *should be an educated operative surgeon*—and he should be prepared to operate upon any patient who requires special *mechanical treatment after*. But the operative *treatment* should be secondary to the *mechanical*.

"The future of orthopedic surgery depends upon the deliberate study and development of *the mechanical aspect* of the work.

"It was, however, the *mechanical* rather than the surgical side of orthopedy of those days which brought to the front the names of these who are today recognized as the fathers of orthopedy in this country, and it was the *mechanical treatment of spinal disease*.

"On previous occasions I have called your attention to *the relation of orthopedic surgery to general surgery*—to the necessity of a thorough *mechanical training* as a preparation for orthopedic work, and to the *future demands of orthopedic surgery from a mechanical standpoint*.

"The *treatment* of chronic deformities would be emasculated if *mechanical treatment* was omitted.

"To the legitimate orthopedic surgeon, therefore, operative work takes a secondary and minor position, just as *the mechanical part takes by far the most important place*.

"In short, if *orthopedic surgery* is to maintain *its position among the specialties of medicine*, it must exist upon a *mechanical foundation*.

"One may be an operative surgeon and know but little or nothing of real orthopedic work, *but the orthopedist must be the one and know the other*.

"In closing my remarks, I feel that I ought to state that *the conclusions reached are based upon an experience of nearly thirty years of orthopedic work*."

With such an extensive experience, the dean of American Orthopedic Surgery ought to be standard. He ought to know whereof he speaks.

"From *A Text Book of Orthopedic Surgery*, by Edward J. Farnum, M. D., I quote the following paragraphs:

"Gibney, in a more recent work, says, 'The more generally accepted definition is, *that branch of surgery*.'

"The method of *treatment* may be either medical, surgical, *mechanical* or moral."

In speaking of Pott's Disease, he says: "For convenience, the method of treatment may be considered under four headings. * * * Second, the treatment by supportive *mechanical appliances*.

"It is difficult to secure sufficient fixation in the recumbent *treatment* without the use of some form of *fixation frame*. An extension adjustment can be placed on the ends of the frame so as to produce the required amount of *extension of the spine*. In some severe cases, fixation of the trunk may be further secured by *using sand-bags in connection with the frame*."

Page 169 illustrates one of the many devices with which *traction is applied*.

"The patient should have *extension* applied to the spine so as to *correct the curves as much as practicable*, for by so doing

the deformity is diminished and the irritation from pressure will be relieved. The *extension* should not be sufficient to produce pain."

Under the chapter, "Deformities of the Spine, Lateral Curvatures," he says: "In mild cases and those of short duration, the curves straighten out under *suspension*." It must be remembered that "*suspension*" is an upright form of *traction* using the weight of the body for the feet extension.

Figure 90, page 191, shows one of the common methods of *applying the traction principle*.

"Correction of the deformity. A *mechanical* support is demanded in some cases, not to forcibly correct the deformity, but to act as a support where the *spinal structures*, ligaments and muscles are too weak to carry the load." It will thus be seen that Dr. Farnum has no confidence in mechanical supports for the cure of deformities. Why are "the spinal structures, ligaments and muscles too weak to carry the load"? *The cause has not been adjusted*, therefore they continue to *treat the effects*.

Chapter on "Torticollis" contains the following: "The principle involved in the *mechanical appliance* is to obtain *fixation* on the trunk or shoulders from which *counter pressure* is made upon the head."

Dr. Farnum has this to say of "Ankylosis": "The brisement is first applied toward flexion and carried as far as possible, and then *extension* is made. In many cases the adhesions will yield at once with a sharp crack, or series of cracks, sounding very much as if the bone had been fractured." *Instead of making conditions unfavorable for an ankylosis to exist they endeavor to break the conditions after existence*. In other words, *treat effects, rather than adjust the cause* that made the ankylosis a necessity.

"Bed *extension* can be accomplished by the use of 'Buck's extension' as employed in the *treatment* of fractures of the femur. It is fastened to the leg and *extension made by a rope over a pulley at the foot of the bed with weight attached*. The amounts of weight to be applied should be sufficient to relieve the child.

"A combination of *bed-extension* and *mechanical* protection may be had in the use of the *bed frame* with the *traction apparatus* applied.

"*Mechanical treatment* consists in using some form of brace or *fixation apparatus*, either with or without *extension*.

"The recumbent and *mechanical treatment* will produce a cure in many cases, especially if it is mild, or if there is no abscess present. When after a reasonable trial of this *treatment*, no satisfactory progress towards recovery is evident, resort should be had to operative *treatment*." *As long as they continue to*

resort to "treatments" no satisfactory progress towards recovery would be expected." If the cause was adjusted in all acute cases there would be no chronic to run to the impossible stage.

Orthopedic Surgery, by Whitman, in speaking of "Tuberculosis of the Spine," says: "An element of *traction gravity* is present in some instances.

"This traction is usually applied by means of the halter as used with the jury mast. The straps are attached to a cross bar at the upper extremity of the frame, and *traction* can be made by simply tightening them, or if the upper part of the frame is somewhat elevated the weight of the patient's body makes the proper *extension*."

Under the same head and "*Gradual Correction of Deformity*": "For example, a certain amount of *traction* and *pressure* may be employed with advantage.

"An efficacious method of *gradual* or non-violent correction is that employed by Goldthwait by *horizontal traction and leverage*."

In describing a certain method of *spinal treatment*, he says: "If *traction* is desirable, it can be *applied by means of a windlass, which is attached to each end of the frame*.

"It may be stated of *forcible correction of the spine*, that it is in no sense *curative*; that although it has been proved that the back can be straightened, in many instances with ease, and in most cases with but little danger, yet the retention of the spine in the corrected position is difficult, and a *certain immediate recoil toward deformity is the rule*." Whitman is an authority on Orthopedics. He here *denies the curative values of methods that forcibly compel the spine to return to its old position*. *Clinical experience has no doubt forced Dr. Whitman to take his position*. If he knew that every spinal disease has a cause, which is a subluxation and then knew how to adjust it, his opinion would have been reversed.

"In fact, correction of deformity is in no sense a substitute for prevention. *It has rapidly lost favor* recently, partly *because of recurrence of deformity* and partly because experience has shown that the same degree of rectifying may be attained by *milder methods*."

Orthopedic Surgery, by Bradford and Lovett, p. 56, says: "*Traction of the spine* can be employed by attaching an arm at the head of the frame to secure sling.

"*Traction, so much used* by the earlier French Orthopedists, *can hardly* be thought to *separate directly the diseased vertebrae*, as was originally supposed, except when applied in the cervical region. Experiment has shown that great force is required to pull the normal vertebrae apart. *Traction, or extending weights* applied to the trunk, may, however, diminish the physiological curves and thus diminish pressure."

The "pressure" so frequently referred to is that which is supposed to be upon the spinal *cord*. They do not consider that pressure upon the spinal nerves is a possibility.

"In *some acute* cases this system affords *relief*, probably as a correction to muscular spasm, and also as a means of fixing the patient." *According to these eminent authorities, no cure is possible from the application of traction applied in the spine.*

"*Traction* in the lumbar region may also be applied by employing *extension by weight and pulley* (as in Buck's *extension*) to both legs, and raising the foot of the bed."

Two means of *traction* are known to orthopedic surgeons. 1st, by the *prone position*, then *applying the pulling device at the head and feet, both working simultaneously*; 2d, *clasping the axillae and neck from above and hanging the body*, so that feet will not touch floor. Thus he gets the same action of the weight of the body taking the place of the pulleys at the feet.

Bradford and Lovett go at length to describe the latter method, which is reproduced in full.

"*Treatment by Suspension*"—*Treatment* of Pott's Disease, acute or chronic, are both referred to. The pressure upon the diseased vertebræ by super-imposed weight can be removed by *suspension*.

"Suspending a healthy person by the head obliterates the physiological curves and the spine becomes straight as far as its formation will allow. The spine of a new born child becomes straight by *suspension*, but in an adult the changes in the shape of the bones, strength of ligaments, and the tension of the muscles, prevent the column from becoming perfectly straight.

"In *suspension*, in old caries, of the spine, it is only the physiological curves which are obliterated, *the sharp kyphosis is held too firmly by inflammatory adhesions to permit of correction*; in earlier cases with movable vertebræ intravertebral pressure must be, in a measure, diminished at the point of disease by *suspension*, but *suspension does not cause a disappearance of the sharp, angular projections at the point of disease*, and in cases that present themselves for treatment and *deformity cannot be corrected in that way*. In patients suffering with the symptoms of Pott's Disease, *relief* will be afforded by *suspension*."

If these authors understood and knew the cause of such diseases they would not waste time in treating the effects by suspensory methods. They should suspend with treating effects and adjust cause. If such was done an absolute cure, not "relief," would be the result.

In the following paragraph you will notice "*traction*" and "*suspension*" are terms used synonymously.

"The only practical application of *continued suspension* in the *treatment* of Pott's disease is found in caries of the cervical region, when *suspension* can readily be obtained by a jury-

mast, running up from a plaster jacket as a base, in the manner soon to be described. *Traction* may be exerted by the elasticity of the bent iron rod forming the upward continuation of the jury-mast.

"A most thorough and exhaustive investigation of the effect of suspension in caries of the spine has been published by Anders (Archiv. f. klinische Chirurgie, 1889, 38 Bd., P. 558). His conclusions coincide with those of previous investigators, but his researches are more thorough than have previously been reported. He proves conclusively that the effect of suspension in caries of the spine is not to separate the diseased vertebrae, or in fact to directly alter the projection. The flexible portion of the spine is altered by suspension, as it can also be altered by recumbency, the prone condition, or different attitudes."

From this high authority we must conclusively draw our conclusions that the traction tables are of no value, if we consider its incipient object, which was to stretch the spine at ankylosed portions and to make the breaking of them easy. The above facts prove that if these machines did accomplish results they would not now be hunting for something that would. It is one continual experiment. Adjusting the cause of each deformity is the proper thing to do. This can only be done by hand. There is no machine made in the world that can or slightly assist in adjusting such. Any machine can modify the normal curves in an entirely free spine. Mechanico-therapy cannot loosen the ankylosis.

"This has been proved on the cadaver, and in suspension of patients, the projection at the diseased portion does not disappear."

"Other appliances are numberless, and are chiefly modifications of one or the other of these standard methods of treatment." By prone traction or suspension.

"It should be remembered, however, that strain upon the arms or scapulæ connected as they are to the spinal column by the trapezius and the latissimus dorsi, does not tend to straighten the upper part of the spinal column."

Pages 64, 66, show many different forms for applying the upright traction method. These are varied somewhat by each orthopedist yet each embodies the same principle, treating effects.

"The use of a distracting force, which is described in the works of the older orthopedic surgeons with the intention of obliterating the curve by a direct pull, is inefficient, as the amount of force that can be applied for any length of time is not sufficient to effect as much as the simple position of recumbency."

"The employment of this method for the sale and continued treatment of lateral curvature is, of course, impossible, as the disease ordinarily runs its course through several years, but in extreme cases such methods may be applied temporarily." All

fevers "runs its course," but, nevertheless, it has its cause. *Why not adjust that and thus cut short its course? Why not?*

Page 157 again illustrates three different methods of *fixation of traction*.

Page 181 illustrates a solid bottom table, about four feet wide and six long, running crosswise at the end. A pipe is seen fastened at the head, from which is a strap with hooks to fasten each extremity to. This illustration has underneath "*Reclining couch with lateral pressure and traction.*"

Figure 237 illustrates "*Reclining couch with Traction by Weight.*" The "couch" is so arranged that it can be raised or lowered at the head, leaving the feet stationary. *The feet are fastened into a harness and then "traction" is applied by weights attached to the harness which pull over the end of the table over a pulley.* The amount of "traction" depends upon the amount of weights or sandbags that are piled on.

In these illustrations the patient is laying face upward, *it matters little* on this point for before this article is finished authorities will be found who describe *the same process with face downward.*

In speaking of the above illustrations Dr. Whitman has this to say: "The accompanying picture illustrates the forms of a reclining couch for *lateral pressure and a traction force.* The latter (traction force) is of little advantage except as a means of securing the patient.

"*Spinal couches present a wearisome method of treatment, but in cases which are rapidly becoming worse, they offer the most thorough means of treatment.*

"*Corsets and mechanical appliances necessarily weaken the muscles of the back, and are to be avoided if possible, and when they are used, massage is advisable in addition to gymnastics.*"

Orthopedic Surgery, by Young, says, in defining Orthopedic Surgery: "*Orthopedic Surgery may be defined as that department of surgical science which includes the mechanical and operative treatment of chronic and progressive deformities.*

"*As a special branch of medicine the sphere of its influence reaches out in three directions.*

"*Orthopedic is, therefore, a legitimate special section of general surgery.*

"*As a special branch of surgery, orthopedics dates its existence from the time of Audry (1741), who coined for it a name, and as an established speciality it obtained its first firm foothold upon the profession.*

"Previously and subsequently to Stromeyer's discovery, *mechanical appliances formed the fundamental part of the treatment of deformities.* While the introduction of the antiseptic methods have greatly enlarged the field and precision of *orthopedic operations*, they have *not diminished the mechanical in-*

genuity which manifests itself as such an important element in this branch of surgery. The tendency has rather been toward mechanical extravagance.

"Modern ideas demand that the orthopedic surgeon of to-day should be an educated surgeon, in every sense of the word. carefully trained in clinical and operative surgery, thoroughly skilled in mechanical principles, he must be equally prepared in all three branches of his special art.

"Every student of medicine upon graduating, or before entering upon the practice of his profession, should be instructed in the fundamental principles and practice of the orthopedic art. The orthopedic art is thus elevated in importance as a special branch of surgery, and the orthopedic surgeon is advanced in dignity and reputation.

"Equipped with modern improved mechanical means, one approaches the subject of treatment of spondylitis with greater confidence than earlier writers could possibly have done.

"An apparatus of this character permits also of extension, counter-extension, and fixation, a method of treatment of advantage in cervical disease. Suspension as a mode of treatment is an old plan which has been brought into prominence; it was employed as early as 1826, by Prof. J. K. Mitchell; recently independent of support, as a remedial agent in uncomplicated cases it has no special value.

"It is now recognized that the deformity itself cannot be changed—the vertebral column above and below the gibbosity may be extended and straightened, but the diseased area remains fixed. In fact, attempts to accomplish this have been followed by immediate paraplegia and even death."

No wonder Dr. R——— was sued for damaging a patient after the use of the traction table. He undoubtedly injured this person. Walked into the office, and after the "treatment" was paralyzed from hips down. To you "Chiros," remember—"the diseased area remains fixed." You may stretch all you like to break an ankylosis, "the diseased area" still "remains fixed."

"The machines and appliances employed are innumerable."

Pages 46 and 47 show three different illustrations of how to apply traction to the suspended body.

Page 102 shows the lower end of the body with traction applied to the limbs. Figure 54, page 103, shows an illustration of patient attached to a bed by straps around shoulders and others pulling on the legs from below. The description says: "Bed frame with Traction apparatus added."

On page 414 we find the following mention of "traction" in connection with dislocation of the hip:

"Treatment. Treatment by extension and apparatus. Cases have been reported in which benefit has resulted from the use

of continuous *prolonged extension*, but in all these cases there appears to have been some doubt as to the ultimate result. Later, it was arranged that the child should sit up, wearing an appliance which exercised *traction*."

Orthopedic Surgery, by James E. Moore, M. D.: "The book is written by a general surgeon who has taught orthopedic surgery for the past decade.

"It is so essentially a *part of general surgery*.

"It is only within the past few years that this has kept pace with *other branches of surgery*.

"And when *this branch of surgery* will be as reserving and as well recognized as ophthalmology is at the present time."

"In this esthetic age all are willing to acknowledge the importance of *this branch of surgery*.

"Americans are justly famous for the inventive genius and *mechanical ingenuity*, and it has been by these means that they have taken the lead in orthopedic surgery.

"The fact that *mechanical appliances* are so often necessary in *orthopedics* is one thing that has retarded the progress of *this branch of surgery*. It requires much time and patience to become skillful in their use.

"*Orthopedia* is a *distinct branch of surgery*."

Under the chapter, "*Deformities of the Spine and Thorax*," he says: "Shoulder braces or *mechanical appliances* are to be avoided in these cases, because they do more harm than good.

"Another important method of *treatment* is *mechanical correction by means of a machine by which heavy pressure can be made*. The writer has been greatly pleased with the machine originally invented by Schede and modified by Weigel and others. *Mild cases can be treated successfully* by this method, but it will fail, like all other treatment, in *severe cases*." The Chiropractor longs for the day when he will get his share of the "mild cases." He will then *adjust the cause*, after which the "severe cases" will never exist. If the cause of the "mild case" is adjusted, how could the case become chronic?

"No special directions need be given as to *how* to apply the pressure. It is sufficient to say that the various *pads and screws must be so adjusted as to apply the force* so that it will *untwist the back*." Such is the directions for a machine to correct Scoliosis (Lateral Curvature). He further says: "*The pressure can be gradually increased* and the time lengthened as the patient becomes accustomed to it."

Under "Pott's disease," page 85, is shown an illustration of a child in bed with the *traction applied* to the head to pull the spine apart.

General Orthopedics, by August Schreiber, M. D., says:

"Marked progress has of late years been made in orthopedics, a *branch of the surgical art*.

"Further still, modern orthopedic methods are of greater importance to the physician than those of the past, when the more active operative measures were not countenanced to the same degree as obtained in *other branches of surgery*.

"As in every *other* branch of medicine, so in orthopedics was the outgrowth gradual. * * * There have occurred many serious *errors*, such as the *forcible straightening of the spinal column*.

"Others, on the contrary, seek to work solely through the *mechanical apparatus*.

"We must here refer to a number of *methods of great importance in orthopedics*; namely, the *extension method* of Volkmann, which has quickly obtained acceptance; the use of *elastic traction* (Burns, Barwell, Blanc, etc.)

"These advances have led to the rejection of many ancient objectionable methods of *treatment*; and have caused *orthopedics* to be considered *today an essential part of surgery*, and even of an importance from a strictly medical standpoint."

Page 25 of this work illustrates *two methods of suspension for straightening out the curves of the spine*. In speaking of these, he says:

"To obtain *horizontal extension* there are a number of *appliances* applicable to *scoliosis, torticollis, etc.*, which will be spoken of under the subject of '*Curvature of the Spine*.'

"We find the principle of *vertical extension* in ancient *orthopedic apparatus*, such as the Blomer chairs, the Shaw sling, and these are not only *useful in case of disease of the spinal column, torticollis, etc.*, but also for curvature of the limbs.

"Un appareil quelqu'il soit ne vaut que par celui qui l'applique. 'It is not so much *the apparatus* as the manner of its application which makes it efficient, and *badly applied will work harm*.'

"As to *orthopedic apparatus* in general the *simplest is the best*. Much always depends on the exact application of *apparatus*, and this is the reason why the aid of an expert orthopedist must, in special cases, be invoked.

"We may divide the apparatus into: 1 * * * 2. Reduction means, by which *curved or deformed parts are restored* to the normal position by *traction or pressure*."

Page 28 shows the application of a *self-suspending device*, at the will of the patient, rather than at the mercy of the doctor.

"A very efficient means of reduction is offered by *elastic traction*, whereby we may obtain a *continuous, slight, graduated force, or, if desired, a very great force* (Barwell, Burns), and we may use for this purpose material with rubber set in (as in the Barwell scoliosis bandage, the Fischer bandage for scoliosis)

or else rubber bands, or rubber rings which are placed between two straps and *the force exerted by which we may graduate, by means of the straps.*

"Elastic traction is exerted in many of the recently devised orthopedic appliances, such as the ingenious apparatus of Blanc, and this traction is all the more to be recommended.

"Thus elastic traction is resorted to.

"Among these appliances with elastic traction are included those where groups of muscles are reinforced by the tension in order to antagonize other groups.

"Spiral metallic springs may also be used for traction purposes, as is exemplified in Heather Bigg's extension bed (Fig. 23), which is shown by an illustration which utilizes the foot grip as well as the head screwing device. "In case of paralysis, these spiral springs are also resorted to."

Figure 34 shows a *"Roberts Elastic Extension Bar, which has the object of pulling tighter, making shorter, the straps that pull the head upward while on one of these 'spinal couches.'*

"Formerly the screw mechanism played a great role in orthopedics, and this is not surprising, for, before the introduction of elastic traction, by means of the screw gradual, great power could be obtained according to the desire of the surgeon.

"The most popular was the endless or Archimedes screw, and this was utilized in many contrivances for contracture of the extremities.

"While the simple endless screw is seen in many contracture appliances we also find the manifold endless screw utilized for the purpose of effecting reduction, as in scoliosis contrivances (Langgaard, Eulenberg), torticollis apparatus (Stillman's and H. Bigg's) machines, for antero-posterior curvature of the spine, contrivances which naturally act the more effectively, the longer the lower arms which are adapted to them.

"The suspension, which Guerin formerly used to a great extent, has today much less recognition. A simple screw passes through a stationary nut and presses on the movable arm of a lever, forcing down this end or preventing its elevation, so that excess of movement is impossible.

"With the majority of osteoclads the portion to be operated upon rests on a hard surface, and at the site of greatest curvature force is exerted through a pad. The simplest instrument of this nature is that of Basch, which acts on the principle of the bookbinders press. Of the osteoclads, those of Blasius, Oesterlin, V. Bruns, Taylor,—we will only represent Rizzoli's which has been especially used for the fracture of rachitic curvatures, and which consists of two rings, the one applied above and the other below the site of greatest curvatures. These rings hold the bone and are connected by a bar through the middle of which works a screw. To the end of this screw is attached a plate, through

which *pressure is obtained at the eminence of the curvature* which is covered by a pad. This pressure is increased until the bone is fractured. The padded rings surround the bone; they are connected by the iron bar and *fixed screws*; the large screw is worked down until the pad over the eminence of the curvature is thoroughly adapted, and then a few quick turns of the screw will break the bone."

In speaking of Torticollis, he says: "The simplest *apparatus* consists in the use of *elastic traction*.

"Of *non-ambulant apparatuses* we would refer especially to the *Esmarch extension bed*. It is a slanting plane on which *the patient is fastened by means of Glisson's slings*. The patient may rest with relative comfort on this bed."

Klopsch, as early as the third day, applied *permanent extension to the muscles of the neck by means of traction through an apparatus attached to the head*. In this respect he imitated Stromeyer.

"It is in these directions that modern practice has chiefly excelled and especially in that *attempts at forcible straightening the spinal column have been condemned*. Such methods, however, cannot be carried out without injury to the general health, and in any event harm may result from uncontrolled movements of the patient.

"*Apparatus* for preventing involuntary movements on the part of the patients, a matter of the greatest possible importance where the case affects the vertebræ of the neck, can certainly only be used in children who are not old enough to be taught the necessity of restraint. Such *apparatus* may act either through *counter-extension* by weights or through *elastic traction*. The patient is placed horizontally on a hard mattress. Extension is obtained by the following mechanism. To a collar around the patient's neck a stout string is attached which passes over a roller at the top of the bed and carries a weight of from six to ten pounds. The weight of the body yields the *counter-extension*. In case of caries in the dorsal or lumbar region *traction may also be made from the axillae*.

"Where the disease is located in the middle portion of the spinal column Rauchfuss' suspension girdle may be used. By means of it pressure is removed from the diseased part and *the requisite degree of traction is readily obtained* by lowering or raising the girdle. This *girdle is drawn tightly, transversely over the bed under the affected portion of the spine and direct pressure on the gibbous is avoided*.

"One application of the *principle of extension* which can always be easily and cheaply resorted to, is the *upright bed* devised by Phelps.

"At an early period *apparatus* was devised which supported the spinal column through axilla crutches or braces; soon, in order to obtain *vertical extension*, LeVacher added a *suspender*

for the head to the supporting apparatus (an apparatus which, after having *long been condemned* as dangerous has now again found general application). *These extension bandages* with dorsal splints and LeVacher's *suspender for the head* for a long time represented the chief means of *treatment*.

"It soon became evident, however, that Taylor's machine, which will be more fully described below, acted mainly as an immobilizing splint, that the *correction was only apparent*, and P. Vogt noted in numerous children that the apparent over-correction of the anterior inclination was due solely to a lordotic flexion of the neighboring segments, while *the kyphosis persisted unaltered*. He therefore modified Taylor's *apparatus* by the addition of means for the *removal of pressure from the spinal column*. He effected this by adding lateral arms with axilla crutches at the level of the crutches, and for the support of the head he added a steel collar covered with leather and united to an *extension* from the dorsal splint. All these *appliances* must be carefully watched; they can only be *made by a mechanic*, their *construction takes time, and they are expensive*.

"It is hardly possible to lay too much stress upon the fact that thereby *we do not aim at brisement force, or obliteration of the kyphosis*, but that we try to circumvent the injurious influence of weight and muscular traction by *careful, gentle, suspension*, simply sufficient to *lessen the pressure on the affected parts*. Sayre lays stress on the point that *the suspension must be gradual*.

"In regard to other *apparatus* resembling the jury-mast we may mention Roberts' *elastic traction head-rest*.

"With reference to *extension apparatus*, Taylor, as has been stated, pointed out the necessity for dorsal flexion, and recommended retroflexion of the anteflexed spine against *a pad placed under the site of curvature*.

"In all these *apparatus* for *backward traction* the *fatal objection lies in the fact that the deformity is increased when the patient bends forward*.

"Great importance attaches also to the passive corrective movements, such as *diagonal pressure in stretched suspension, high chest suspension, straddle seat, etc.*, and particularly *lateral suspension over a peculiar apparatus according to the method recommended by Lorenz*.

"*A couch which is largely used is that of Buhring—an iron plate carrying pads adjustable by screws to bear against the convexities of the curvature*. Schildbach used, instead of *wedge pads*, and Staffel, has devised a combination of Buhring and Schildbach's *apparatus*. He used the *wedge pad* for the lower curvature, and for a dorsal *pad* a broad oblique belt connected with a strongly curved steel spring; all *these parts are adjustable*, as in a third padded brass plate.

"A variety of apparatus acting by traction and counter-traction has been constructed since the time of Hippocrates, in the shape of the extension-beds of Venel, Heine, Valerious, Moncour, Guerin, Bouvier, Pravaz, Major, Coles, and others. On these the poor patients were formerly tortured for years without effect, so that Vildberger justly condemned them. From the large number we select only that devised by Heather Bigg, which will be readily understood from Fig. 133 and which permits at least some movements, while the elastic appliances exert constant traction, correcting the curvature; and we also show the simple extension frame of Beely which may be used in connection with other methods."

You will notice in this paragraph that the words "*extension frame*" are used synonymously for the term *traction beds*. They are considered one and the same. Each do the same work.

These "*extension beds*" are "*readily understood*," for they are made with a foot clasper and a stretching or weight device at the head end. The purpose being to use *traction* upon the body.

The length of this article will substantiate the following: "*The number of scoliosis apparatus is enormous* and their close description would fill volumes.

"The apparatus which acts by elastic traction devised by Barwell has the advantage of great simplicity; but it *can only exert elastic lateral pressure* and has no torsional power.

"Where necessary, elastic traction may easily be added over the greatest convexity.

"We may gather from the large number of apparatus for scoliosis that their corrective effect is by no means prompt, and some authors (Sayre, Dally) reject them all. Sayre at all events goes too far in rejecting all such *apparatus* as useless and as merely forcing the patient to bear horrible torments."

In *History of Medicine*, by Alexander Wilder, M. D., we find this mention of Hippocrates: "Considering the time and circumstances, Hippocrates appears to have possessed a very proficient knowledge of surgery. He devised several kinds of apparatus for curvature and the reducing of luxations."

Wyeth's Text Book of Surgery, by John A. Wyeth, M. D., in the chapter on Orthopedic Surgery we find the following quotations, in speaking of "Spondylitis": "*The suspension apparatus of Reynders & Co. gives perfect satisfaction.* The center and lateral straps should be adjusted so that when the lift is made the *tension* will be equally distributed.

"The patient is to be gently and slowly drawn up by means of the apparatus until he feels perfectly comfortable.

"So that traction by the strips *will be* directly upward.

"The patient is placed upon *two* tables of equal height, and *the tables are then separated* so that the parts selected for the zone may be freely accessible from all sides. *One assistant grasps the patient under the axillae, the other makes steady but easy traction at the thighs.* While the patient is in this prone position, the operator *fits the uprights to the line of the transverse process;* in other words adjusts the apparatus to the deformity.

"*Traction as steadily maintained.*

"The *suspension carriage* of Dr. Meiggs Case, which *lifts from the axillæ, chin and occiput,* is a valuable *apparatus* in the treatment of Pott's disease in the cervical and upper dorsal regions.

Orthopedic Surgery, by Charles Bell Keetley, M. D.: "In truth, *orthopedics as a department of surgery* has developed in accordance with professional and individual convenience.

"*Extension and counter-extension are made by weights* attached to the head and upper arms respectively.

"From a wooden yoke or stirrup above the head passes down on each side a piece of strapping, which covers the corresponding side of the head, the parotid and mastoid regions, and the neck below the level of the jaw, but does not reach its fellow of the opposite side beneath the chin.

"The *weight extension* is applied to the upper arm exactly in the same manner as that in which it is affixed to the leg.

"Commencing with 4 lb. each, both the two *weights should be gradually increased,* until in a week they equal 7 lb. each or more, if an increase of weight can be borne and *appears* to have any beneficial effect. Of course regard must be had to the size and strength of the patient. It is worth while to keep up this *weight extension* for a month.

"Of portable *apparatus* for wry-neck there are many varieties.

"The movement may be given by (1) *elastic traction*, (2) *simple traction*, (3) *pressure*. Elastic traction is usually applied by means of an accumulator acting in such a way as to reinforce the uncontracted sterno-mastoid, as e. g., in Sayre's apparatus. Simple *traction* is applied by leather strap circulets and collars, such as those used with a jury-mast; and, indeed, it requires a jury-mast or some analogous *contrivance*, as a stay or support above and to the side of the head. *Pressure is applied* either to a circlet round the head, *or to pads* pressing besides the chin on the side, and on the post-ural region on the other, *or to moulded plates, caps or shields.*"

After spending many pages describing the curative possibilities, he says: "Although *genuine cure is not to be expected,* there is plenty of room for *treatment*, in fact, *treatment* is, in most instances, an absolute necessity to prevent increase of the deformity.

"Still other forms of *portable apparatus* are those by which Barwell has attempted to *apply elastic force*.

"Passing now to the *padded plates* which, by means of *keys and screws*, are made to *press against the gibbosities*, it must be *confessed their action is often nil, and never more than trivial*. Even the most skillful arrangement of pelvic girdle, abdominal or thoracic bands, and *perpendicular metals* gives them but a *feeble leverage*.

"Against all contrivances for exercising pressure on the gibbosities the objection may be urged that their action is very indirect and distant on the spinal curvature itself.

"As *extension* opens out the curves of the scoliotic spine, it necessarily satisfies indications 1 and 2; i. e., it increases the perpendicular pressure on the side of the convexity of each curve and decreases it on the side of the concavity.

"I have made many measurements and can say *positively* that an *extension* of $\frac{5}{8}$ of an inch can frequently be kept up for a month. I have frequently found such a patient shorter with the spinal support on than with it off, and that, even to a difference of more than an inch.

"A quarter of an inch is a very respectable amount of extension for a steel appliance to keep up.

Extension.—Extension is effected either in (1) the upright position, (2) the horizontal, or (3) the inclined.

"The practice of extension in the upright position, excepting in so far as it was supposed to be affected by spinal stays and corsets had fallen into entire disuse for more than half a century until a few years ago it was revived by Sayre. But it was originally devised and employed by the illustrious Glison 230 years ago, and also by Nuck forty years later. The method by which they obtained their vertical extension was practically the same as the plan of suspension which we now employ. About 130 years ago Levacher de la Feutrie, in the Memoirs of the French Academy of Surgery, described, with excellent drawings, a kind of stays bearing what we should now call a jury mast, which took off the weight of the head by means of a chin and head strap.

"So long as the suspension is kept up there must be an increased pressure on the convex border of each curve—in other words, on the side towards which the individual vertebræ are thickened—whilst there must be a negative pressure on the other side. It has been urged with some truth that the extension may tend to stretch and weaken the ligaments uniting the vertebræ.

"Horizontal Extension. This is undoubtedly a very powerful means of acting on the spine, and one which can be kept in vigorous action for many hours out of every twenty-four. It was formerly extremely popular, especially in continental orthopedic institutions. Indeed, it is a method especially adapted for

use under circumstances where the patient can devote all his time to *treatment* and be under the constant skilled superintendence. The great objection to the *treatment*, as generally practiced, is that being kept up, as a rule, eighteen hours out of the twenty-four, it is *inconsistent with proper participation* in ordinary social and educational life.

"The appliances for horizontal extension consist of a flat bed or couch with a collar or chin and occiput strap, similar to those used for suspension, but carefully padded and also a well padded, well fitting pelvic girdle of leather. Axillary loops are also often used. The head and axilla gear are merely fixed by two leather straps which pass downward, one along the outside of each leg, and are united by a crossbar below the feet. The force itself may be applied by means of a screw, but it is much better to use a weight and pulley. The amount of weight cannot be arbitrarily fixed. It is to be determined by observing the effect on the patient's spine, and must, of course, stop short of causing pain or discomfort. If the inclined plane be used instead of the horizontal, the weight may be dispensed with. The extension is produced by gravity acting on the patient's pelvis and lower extremities.

"Certain points must be carefully attended to in the use of extension on the horizontal couch or inclined plane. The weight must be applied very gradually, commencing with a very light pull increased until the maximum is reached.

"Half a century ago it was the common custom to keep scoliotics continually in the horizontal position for months, or even years, much to their detriment. Now I know of no one who would prescribe its use for more than 18 hours out of the 24. In the remaining six the greatest care must be taken to preserve what good effects may have been secured from the horizontal extension.

"The employment of the inclined plane in the treatment of scoliosis was originally due to Reasmus Darwin, the grandfather of the investigator of the origin of man.

"Compression in the horizontal position. There are at least three ways in which this is applied, (1) by screw force, (2) by elastic force, and (3) the weight of the body is itself made to supply the compression. Any one of these may be combined with horizontal extension.

"Principles 1 and 2 can be effectively applied only by means of special apparatus. As may be imagined, there are many different ways of fixing and arranging the requisite screws, springs, padded plates, and girdles. Of course, the pressure is, as a rule, applied to the convexities, e. g., to the dorsal gibbosities, and the counter-pressure above and below, e. g., in the axilla and against the loin of the opposite side.

"By real extension I mean the actual separation of diseased surfaces, indicated by the opening out of the angle of an angular

curvature. At the International Congress of 1881, Mr. Edmund Owen spoke warmly of *the barbarity and danger of attempting to effect this*;

"But of the apparent extension effected by suspension and the application of the jacket, the greater part takes effect in the parts of the spine above and below the seat of disease."

"Extension is applied to a patient in bed by means of an arrangement of straps precisely analogous to the stirrup by which a leg is extended. The extensive force is a weight connected with a pulley. Cases treated by extension in bed are generally either cervical or upper dorsal. The stirrup is then attached to the head and counterextension can be obtained by raising the head of the bed, or, if preferred, by extension from the hips, downwards. If the disease is lumbar, the strapping should be applied, not to the head, but to the skin of the thorax."

"A mode of rest which tends to effect extension in some cases is the prone couch. But in practice the prone couch, if used continuously, is generally more disagreeable to the patient than beneficial to his spine. I know of no results attainable with it which the surgeon cannot more conveniently attain without it."

"M. Chipault 'advises only gentle traction and light compression under chloroform.'"

"Serious and fatal consequences have now been repeatedly observed after the forcible straightening of angular curvatures."

"With regard to the manner of straightening out the spine it is done by combined extension of the patient and compression of the boss. The patient is laid prone upon a table; the hips and the upper part of the sternum are raised on padded blocks. The extending force is applied on the one hand to the legs, on the other to the head, and sometimes also to the arms; if the angle is not too high in the dorsal region. Calot put the limit of justifiable force at eighty kilogrammes or one hundred and fifty-six pounds."

"The pressure on the boss should be of less weight than the extension and time should be taken."

Robert Jones and Tubby give us an *average* duration of after-treatment two or three years, which is probably not too much.

"Both the leather collar and chin strap used to be employed to produce extension in spinal curvature many years ago."

Willitt's Method. In the case of an adult this requires more elaborate arrangements than in the case of a child. As practiced by Mr. Willett it may be thus described: *The apparatus are two sets of pulleys, a jack towel and a broad band of leather with rings at each end. This band of leather is divided longitudinally at each extremity to near the middle so that it may be said to have four tails.*

"The patient lies in the prone position on a stretcher, truck or table, and the two pulleys are fixed to hooks, one above the patient's head, the other above the buttocks or thighs. The leather band above described is placed transversely beneath his chest, at the root of the neck, the two tails at either end of the strap being carried, one across the axilla and the other over the shoulder, both being then carried up and connected with the pulleys above the patient's head.

"The jack towel is spread out beneath the patient's thighs from hips to knees, and its two ends connected with the posterior set of pulleys.

"Now the two pulleys are put in action until the patient swings with his elbows just touching the table beneath him.

"In this position cramps, or 'pins and needles' in the arm are not infrequent.

"Or the child can be stretched from one stool to another. Some soft material should be placed beneath its elbows, and its mother should watch to see that it does not fall.

"Or—and this is the best extempore form of this series of arrangements—place two chairs and a pole of wood across them from the back of one to the back of the other. The whole can, if desired, be placed on a long table instead of on the floor. The pole is preferable square in section. It should be firmly lashed to the chairs. The hips are suspended by a towel, not spread out, lest it keep the knees up, and thus produce that excessive hollowness of the lumbar spine which is to be avoided in dorsal cases.

"The problem then is to keep up extension while the transference from the perpendicular to the horizontal is being effected."

Manual of Surgical Operations, by J. Coster, M. D., 1825, says: "If surgery be the most efficacious recourse of the healing art, it is only, as Prof. Richerand observes, in the hands of such as cultivate it with the diligence it merits.

"A very great difference of opinion has long subsisted among surgeons, relative to the mode in which counter-extension should be made, and a very great variety of machines have been invented for the purpose of accomplishing it. At present, the most generally used apparatus is some modification of Desault's splint, or of the inclined plane, which are found to be capable of effecting all that can be expected from machinery, without the risk and expense which many of the more recent splint, etc., produce."

A Treatise on Orthopedic Surgery, by A. H. Tubby, M. D.: "That this volume may be a reliable guide to medical men in the treatment of deformities, and to advanced students in the understanding of a somewhat difficult branch of surgery, is the wish of the author.

"Treatment Directed to the Spine.—The principles of treatment are three in number—

"(a). To *fix the vertebral column*, and to place it in the best possible circumstances for healing.

"(b). To *remove the weight* of the upper part of the body from the diseased vertebrae.

"To carry out these principles we have two methods at our disposal, viz.: *recumbency* and the use of *retentive appliances*. They may be employed separately or in combination in individual cases, but can never be used indiscriminately. *The precise value of each varies.*

"The complexity, weight and *intricate mechanism of the apparatus* described in some books would almost make one believe that their designers were about to return to the days of Ambrose Pare's hammered cuirass, with steels and springs super-added.

"Serve merely as *fixation appliances*, only temporarily during suspension as a means of traction.

"When to perform an operation is guided by the following: In cases where the lesion seems to indicate the *failure of mechanical treatment*.

"In cases where, during the employment of *intelligently applied apparatus*, the symptoms continue to increase in severity.

"In cases where, after a certain period of *careful mechanical treatment*, say eighteen months, the condition has remained stationary."

Under kyphosis, "*Artificial supports in the majority of cases are faulty in theory and pernicious in practice. I allude to shoulder, braces, back supports.*

"A useful combination of couch and exercising apparatus has been designed by Mr. Adams. The exercise essentially consists in the patient drawing herself up the *inclined plane*, whilst the body is resting on the sliding board or movable stage, which is softly cushioned.

"*The patient should draw herself up and allow herself to descend by her body weight five to ten times.*

"*The treatment by suspension* has already been spoken of, and is to be depreciated, if used for every case. *In relaxed spines suspension will probably make them worse. A modification of the usual suspensory has been introduced by Mr. Adams.*

"*The treatment of congenital wry-neck is either manipulative, mechanical or operative.*"

The following is found under the head of "Contractures and Ankylosis": "*Gradual extension by weights and instruments. From experience I do not think that any particular advantage is obtained by these means. If the fibrous ankylosis is so firm as to require the force obtained by screws and racks to make it yield in some degree, then this treatment had better not be undertaken. Apart from the questions and time and expense, the results are*

often disappointing to the surgeon and positively detrimental to the patient.

"Treatment.—Extension either in the recumbent position or by apparatus. Forcible reduction. The oldest form of treatment is by continuous extension.

"He subjected his patient, a little girl, aged four years, to complete recumbency with extension for thirteen months, and then allowed her to get about for a year."

Page 536 illustrates a *traction couch* which is so familiar to all orthopedical works. The usual methods are used for *extension*.

"Volkmann also obtained good results by these methods of extension with abduction.

"I have tried the treatment by recumbency and extension in two cases with a great measure of success."

After description of these cases, he says: *"I do not claim that these cases are cured, but so far there is every indication of it, and I shall take an opportunity of reporting their condition.*

"It is very evident that treatment on these lines is very tedious to a degree and difficult to carry out.

"With reference to the use of retention-apparatus, my experience is that directly they are removed the spasm returns.

"Other spinal diseases such as cervical pachymeningitis, syphilitic myelitis, amotrophic lateral sclerosis, Friedreich's disease, syringomyelia are associated with deformities which cannot unfortunately be remedied by orthopedic surgery."

The American Text Book of Surgery has thirteen prominent authors.

Chapter on *"Surgery of the Spine,"* says: *"Treatment.—Perhaps the most important advice to be given to the general practitioner in relation to the treatment of this condition is a caution against the use of braces, corsets, jackets and other mechanical appliances which, by confining the movements of the chest and supplying an artificial support in place of the muscles which it is most desirable to develop, actually do great harm to many patients instead of good."*

On page 557 is a drawing showing *how to apply the cervical extension while prone* in bed.

Pp. 558 and 559 show more illustrations of the *suspension idea*. The reader will bear in mind that the terms traction, suspension, extension or counter-extension are equivalent for the other.

"This in many cases can be done by the usual methods of extension and counter-extension with manipulations."

Congenital and Acquired Deformities, by A. B. Judson, A. M., M. D.:

"Recognition of *Mechanical Surgery*. *It needs not, however, on that account, be omitted from the armamentarium of the surgeon.*"

In 1862, Dr. Stephen Smith wrote: "*It must be evident to everyone that mechanical surgery is a branch, and a most desirable one, of surgical science and art. It is not simply a branch of mechanics to which any ingenious artisan can successfully turn his attention; it requires also an accurate knowledge of anatomy, of physiology and surgery. Rationally, the mechanical surgeon must be a thoroughly educated physician as well as an inventive genius.*

"A better plan is to assume that *mechanical assistance* is required at the outset—and will be necessary throughout the time of growth, afterward. It is true that *treatment thus prolonged and troublesome can only palliate and not cure*. It implies also exacting attention to *mechanical details*, frequent supervision, and many alterations and adjustments of *apparatus* in response to the demands.

"The result of treatment falls short of perfection, but the same may be said, as a rule of the treatment of spinal deformity and joint diseases, and in fact, nearly all of the affections in orthopedic surgery.

"The limitations of achievements are so conspicuous and so sure to bring discredit upon medical authority that it seems to have been agreed that the inevitable may well be transferred to a specialist.

"Experience has shown that certain effects supposed to be produced were impossible, and others which might have been practicable were unnecessary. *Traction simply stays the joint and relieves the pain, while the patient runs about and follows the ordinary pursuits of his time of life for the months and years required to bring about recovery*, with restoration of ability and symmetry, so far as may be.

"That traction owed its efficiency to its ability to overcome the muscles which were thought to be destroying the joint by their reflex contraction.

"If, on the other hand, the traction applied were elastic and unyielding, the stretching which it could give to the muscles would soon have been arrested by the ligaments, and in any event it would have been insignificant in view of the elongation to which they had been accustomed in the alterations of contraction and relaxation.

"If, indeed, traction could have been applied directly to the bone without the intervention of the soft parts, it possibly might have been in a position to counteract the muscles. It had to be applied, however, to the skin, which was but an elastic envelope of a mass composed largely of relaxed muscular and yielding tissue.

"When the muscular spasm is urgent, fixation cannot be secured, save by the use of force as constantly acting as that which is to be overcome, and the agent best adapted to this purpose is traction."

"When pain is thus seen to be controlled equally by tractive and retentive apparatus, the correlation of traction and retention is evident."

"That traction secures fixation is capable of demonstration."

"To say that traction stretches the muscles until they act directly as retentive splints overlooks the lengthening which belongs to them in customary relaxation."

"If the pulley is attached to the wall of the room at a considerable height, the direction which the traction takes may be changed."

"Difficulty of direct mechanical reduction. Indirect removal of deformity in the way proposed would obviate the necessity of restoring to direct mechanical correction. It is noteworthy that an extreme deformity is more easily reducible by direct mechanical force than a moderate one. A metallic rod bent as in an inverted V may be readily straightened somewhat by manual traction and counter-traction, as in Fig. 104 (which looks like the inverted V half straightened), and still further by the same forces mechanically applied, as in Fig. 105" (which is traction by weight).

"It is evident, however, that the straighter the rod becomes the harder it is to make further straightening by traction. It is questionable whether traction can produce absolute straightness. It certainly cannot over-straighten the rod. But if traction and counter-traction are replaced by the leverage of pressure and counter-pressure, as in Fig. 106 (representing pressure being given downwards at the highest point of the inverted V), the rod may be more than straightened without much trouble."

"Pott's Disease. In the hip fixation is successfully and with advantage developed by traction, and this may be applied to the uppermost region of the spine when the patient is recumbent. It may, therefore, be inferred that fixation of the erect spine is sought only by applying a retentive lever designed for making pressure at the level of the projection and counter-pressure above and below."

"If such an apparatus, efficient in theory, proves not to be mechanically perfect in practice, it will still be found to be useful. The force applied to oppose deformity is unfortunately largely absorbed in bending backward sound portions of the column above and below the point of disease."

"But if the pressure is lightly applied at first, and gradually and carefully increased from time to time, it will be found as the weeks and months pass that the skin will have become hardened without losing its integrity or causing discomfort, and its

condition will indicate whether or not the patient is receiving the full benefit of *mechanical treatment*.

"Treatment of Lateral Curvature. Although it may not be possible to make an established curvature disappear, careful treatment may be expected partly to reduce the deformity or to render it less noticeable.

"It would seem that rotation could be diminished, temporarily, at least, by rolling the chest forcibly between the palms, but it is beyond the power of mechanical therapeutics to produce and prolong this effect.

"Antero-Posterior Pressure. For many years the opinion has been under consideration that antero-posterior pressure, long continued and forcible, would be curative in lateral curvature, as in Pott's Disease. The plan is certainly attractive from a mechanical point of view. This plan may be compared and contrasted with the common method of making lateral pressure on the projecting ribs, which is open to the objection that although such pressure is to all appearances reasonable applied to reduce an obvious projection, it is applied to the ribs, which show an incidental deformity, and not to the curving spine, which is the seat and origin of the trouble. If pressure could be made by invading the cavity and pushing laterally and forcibly against the bodies of the vertebræ, it is conceivable that both curvatures and rotation could be opposed by one motion."

Erichson's Science and Art of Surgery, Vol. I. John Erichson.

Page 593 shows the application of the *common traction principles to a patient laying in bed.*

Orthopedic Surgery. Lewis A. Sayre, M. O.:

"Since that time many gentlemen in different parts of the world have devoted special attention to this particular department of surgery; and many improvements have been made in the mechanical devices for the purpose of relieving deformities of various parts of the body; still at present orthopedic surgery is but imperfectly understood among us. It shall be my endeavor so to develop this department of surgery.

"Many complicated contrivances have been devised for the application of mechanical force. As a general rule, elaborate and complicated instruments should be avoided. It should act in its tractile force gradually and constantly. The persons in charge of, and using the apparatus, should thoroughly understand their manner of action, be perfectly acquainted with their mechanism.

"I have been enabled to test the principle of extending a contracted muscle by the constant application of an elastic force, moderately but persistently applied.

"I have made use of elastic extension. The difficulty in its application, in many instances, without expensive and cumber-

some machinery to secure its attachment, in order to obtain its force, was the only obstacle to its universal employment. At the foot of the bed a pulley is to be arranged in such a manner as the ingenuity of the surgeon dictates, the cord from the foot-board placed upon it and a weight attached, just sufficient to make extension as will render the patient comfortable.

"For a weight, a bag of shot or sand is most convenient, because the amount can then be very easily regulated.

"To prevent the patient slipping down in the bed it should be raised ten or twelve inches by means of bricks or blocks."

Page 469 illustrates the *extension idea* by means of a tripod. Three legs meeting above high enough that a pulley and rope can be fastened, from which the patient can apply the *traction* himself.

In speaking of "Rotary-lateral curvature" and its "treatment" he says: "Almost an innumerable variety of instruments have been devised for the *treatment* of this deformity.

"The use of all fixed apparatus in the earlier stages, as in the treatment of all deformities where we wish to restore lost muscular power, is positively injurious. The principle which should guide you is, to place upon the stretch those muscles which have been inactive and relaxed, and approximate the origin and insertion of the muscles you wish to remain quiescent.

"Various instruments have been devised for the purpose of restoring the spine to its normal position in lateral curvature; using for this purpose levers, springs, ratchet and keys, etc., secured to the instrument and being most ingenious mechanical contrivances, consisting of a pelvis belt fastened securely around the body with side-bars attached, and passing upward, from which are passed straps over the shoulders, thus holding the body firmly together, and pressure being then applied to the side by the means above stated, in order to force the spinal column straight. All such instruments are absolutely useless, and compel the patient to undergo misery and torture. You might as well take a piece of wire in the shape of the letter S and nail it at its two extremities to a board, and then attempt to straighten it by lateral pressure and counter-pressure on either side; you will not succeed without loosening one or the other extremities and thus allowing it to extend.

"Self-suspension diminished the deformity and greatly increased his capacity for respiration; as soon as it was discontinued, the patient felt great discomfort, and the deformity immediately returned.

"When I place this man within a sling passing under the axillæ, and another band under the chin and occiput, and elevate his body by drawing the pulley, you immediately see this broad band of the latissimus dorsi muscle brought prominently into view, and it is an impossibility to bring him straight until this

muscle is either cut or ruptured. While he is thus stretched out, I make pressure upon this muscle with my finger, and he instantly has a spasmodic contraction of nearly all the muscles of his body, thus proving that this muscle is contracted, and that *no power, no matter how long continued, can stretch it to its normal condition. On the contrary, I have proved to you over and over again, that when this structural shortcoming has taken place, which is made evident by the reflex spasm which is produced in it by pressure upon its fibres when under extreme tension, continued stretching tends only to irritate that muscle and cause it to undergo stronger and stronger contractions, and that any attempt to stretch a muscle thus changed in structure excites additional irritation, rather than produces any elongation of its fibres.*" (The above was written in connection to the treatment of scoliosis, lateral curvature.)

"Here, again, we find that a number of instruments have been devised for overcoming the deformity, but the greater portion of them *are entirely unnecessary.*"

Orthopedic Surgery, by Louis Bauer, M. D.:

"In former times, the so-called *orthopedic beds* were employed to overcome the deformity. Their chief design was *longitudinal extension*; some of them combined pressure upon the convex portions of the spine. The construction of these beds, of which a great variety have been introduced into orthopedic practice, bear great resemblance. A belt for the pelvis is connected by straps with a cog-wheel at the foot of the bed, and an appropriate apparatus for the head with the opposite part of the bed. After the patient has placed herself upon the bed, belt and head piece are adjusted and the extension made by means of the cog-wheel. For the sake of lateral pressure, either cushions or wedge-formed pads were brought to bear upon the spine. During a long period the mechanical bed was the only remedy in vogue against scoliosis, and great ingenuity has been employed in its construction.

"Thus changes in the construction and improvements were carried on until *Guerin and Major put a stop to them by demonstrating that longitudinal extension was a failure, unless accomplished by direct action upon the curvature.* Since then, mechanical ingenuity has been thrown into a new channel, with a view of constructing apparatus acting by lateral pressure and counter-pressure. In the latter stages they are, however, inefficient and unable to realize the presented indications.

"The pad for the lumbar deformity is but narrow, but it should be large enough to embrace the side of the body. The pad designed for the thoracic curvature is of much larger size, in order to cover the protruding ribs and shoulder blade."

Orthopedic Surgery. Henry Jacob Bigelow, M. D. This book, in article form, won the *Boylston Prize* in 1884, for the

best article upon the above subject and the best handled. Let us see some of these prize-winning sentiments.

"The principle of the various machines contrived for this purpose is simple, and is fixed by ordinary mechanical expedients, *such as a ratchet-wheel, rack and pinion, or best, by a perpetual screw.*

"A complete machine, the force of which is adapted *as well to the spine as the head, is complicated and expensive. Various models have at different times been contrived for this purpose. They are adapted either to the horizontal or upright position.* The former have received the name of *orthopedic beds*, and are chiefly modifications of those of Shaw and Guerin.

"The head is secured by a horizontal metallic band, descending upon the mastoid processes, which gives attachment to cervical straps for the crown and chin. The iron rod by which it is attached to the steel plate between the shoulders, is *so contrived as to admit of elongation, extension, flexion, rotation and lateral inclination, in any of which positions it may be fixed.*

"The *orthopedic bed* of Guerin is modified from that of Shaw. It consists of the *divided bed*, of which the *superior point of division corresponds to the union of the cervical and dorsal regions, instead of corresponding to the central dorsal, as in that employed for lateral curvature of the spine.* The body is secured upon the bed, and appropriate *lateral force is applied.* The head is confined in a casque, and is secured by a collar adjusted to a chin. *Extension is then effected by the weight of the body. I am not persuaded that the mechanism is the simplest and most effectual.*

"The question relates to the duration and efficiency of the *mechanical treatment.*

"*Distortion of the spine is less amenable to treatment than other deformity; chiefly, perhaps, from the difficulty of applying to it a permanent and properly directed mechanical force.*

"*The results of the treatment of spinal curvatures are, as might be expected, much less satisfactory than those of most other distortions, while the time required is longer.*

"*Mechanical treatment is effected by mechanical beds, in which force is applied horizontally.*

"*Various orthopedic beds have been devised for the purpose of effecting horizontal extension.* In these the force is best applied in one or two ways.

"1. In a direction *parallel to that of the spine.* 2. In a direction *perpendicular to it.*

"*Parallel extension* is effected by fixing the pelvis and applying an extending power to a series of straps around the chin and head. This is best effected by the machine about to be described.

"This method of application in old and very pronounced curvatures, where the extent of the curve gives power or purchase

to this simple traction. Continued force of this sort is liable to produce a relaxation of the ligaments, which predisposes the spine to a recurrence of the deformity. Many young people treated in establishments where these beds are exclusively employed, have their backs flattened; the shoulders and other regions of the vertebral column being reduced to the same plane. These ill effects are to be combated.

"The method which Guerin has called sigmoid extension consists of several elements.

"The first of these is *parallel extension, the head and pelvis being respectively attached to the top and bottom of the bed.*

"The second is a *lateral force applied to a point upon the side of the trunk corresponding to the convexity of the curve, and in a direction perpendicular to it.* The action is analogous to that of straightening a bow, when the extremities are held in the hands and the knee is applied to an intermediate point of the convexity. *It has several advantages over parallel extension. The power is applied to greater advantage.*

"*A third peculiarity is the combination of flexion and extension.*"

Erichson's Science and Art of Surgery, Vol. II, by Eric Erichson, M. D.:

Page 432 says: "The indication that the *proper amount of extension has been made with the pulleys, is the comfort experienced by the patient.*

"The essential points to be attained by this treatment are: 1st, *Moderate extension of the diseased spine by suspension; 2d, Fixation of the spine when so extended.* It fulfills one indication by securing *moderate extension of the diseased spine* at the time of its application.

"As in all other cases *where bone is diseased, at least three years must be devoted to the cure of a case of angular curvature. But that cure consists only in the preservation of life, not the removal of deformity, which is the inevitable result of carious ankylosis.*

Page 458 shows a patient *lying on the bed, underneath which is an iron oblong frame, the upper part of which is strapped to the bed and the patient to the upper end of the frame. At the lower ends is the traction apparatus.*

"The *mechanical contrivances constructed for the purpose of taking the weight of the head, neck and upper extremities off from the weakened spine are of various forms and have had much ingenuity expended in their construction. They all have three principal objects, however much their details may vary, viz.: 1, * * * 2, to carry off the weight of the head and upper extremities from the spine by means of lateral crutches; 3, to influence the convexities of the spinal curve by means of movable plates, acted upon by rack and pinion or screw power.*

The treatment of Posterior Excurvation of the spine is constructed essentially on the same principles as that for lateral curvature, with the exception that the back-plate is so arranged as to press upon the projection."

A Manual and Atlas of Orthopedic Surgery, James K. Young:

"This manual and atlas of orthopedic surgery is the result of an experience of *twenty years*.

"*Orthopedic surgery may be defined as that department of surgical science which includes the preventive, mechanical, and operative treatment of chronic deformities.*

"As a special branch of medicine.

"*The orthopedic surgeon of today must be an educated surgeon, thoroughly skilled in mechanical principles, * * * the application of apparatus.*

"Measurement and the application of *mechanical appliances* will demand the greatest attention.

"*The orthopedic art is thus elevated in importance as a special branch of surgery*, and the orthopedic surgeon is advanced in dignity and reputation.

"The earliest writings upon the causes of congenital deformity are found in the *Ajur-Veda of Susruta*, about 800 B. C."

Page 3 illustrates three old wood cuts which are worthy of special description. Fig. 1 shows a stone slab about six feet long, four feet wide, and two feet high. Upon this, lying face downward, is a patient. He has straps around the ankles, knees, and hips, which are attached together by ropes which run to the foot of the slab; they are here tied around a long upright pole, which is placed on the floor at bottom of the slab. The illustration represents a man pulling the upper end of this lever backward, thus getting a large leverage. Straps also are clasped around the axillae and neck with a large lever, the same as at the feet, which is also being pulled by a man at that point. Thus it will be seen that with such great levers great power in traction can be accomplished. To complete the work of making pressure a third party is sitting on the middle of the back.

Fig. 2 is practically the same as 1.

Fig. 3 represents more study from the point of *how pressure is produced*. The illustration shows the patient being "stretched" in the same manner as described in Fig. 1. The slab is represented close to a brick wall. Several bricks, lower than the level of the patient's superior surface of his body have been removed, allowing a large oak board to be slid therein. This is then brought downward. The plank looks at least eight feet long. At the extreme outer end of this is the third person a-straddle, spring-board fashion. The patient's body representing the elevated outer. This gives great pressure and more leverage upon the spinal column than in the first case.

Page 6 shows several new types of *traction apparatus*.

"In 1806 Johann George Heine *modified the extension bed* of Venel.

"In 1830 *Audrey and Portal condemned the exclusive use of extension beds* and objected to their being used except as an adjunct.

"To Delpech, the scientific founder of orthopedics, *this branch of surgery*.

"*Traction with the patient placed upon the couch or bed*.

"Different forms of *this variety of traction appliances* have been devised, among which may be mentioned as especially valuable the Freiburg *extension* (and the Taylor *extension*)."

Page 154 shows an *extension device*.

"*Treatment by recumbency*. Recumbency as a means of *treatment* still has its advocates. Such an *ablong bed* can be constructed, at a moderate cost, of light gas pipe or stout steel bars. *An apparatus of this character permits also of extension, counter-extension and fixation, a method of treatment* of great advantage in cervical disease.

"While in the recumbent position, *traction upon the spine* should be made, in cervical and dorsal cases, by a *head extension*, of which there are many forms in use; and in lumbar disease the *traction* should be made by adhesive plaster *extension applied to the lower extremities*. In severe forms of disease *traction may be made from both ends at the same time*.

"*The vertebral column above and below the gibbosity may be extended and straightened, but the diseased area remains fixed*. In fact, attempts to accomplish correction by complete suspension have been followed by immediate paraplegia and death.

"*When the patient is suspended by the neck, the rope should never be tied*, but should be held by an assistant, as an accident or even a fatal result might occur in this manner.

"*At the present time there are several methods which aim at the gradual correction of the deformity by the employment of traction and pressure*.

"*And the power applied above to pull the part above the kyphosis back as far as possible*."

Page 256 shows the "Goldthwait *Extension Frame with Patient in Position*." It plainly shows the *patient clasped at the feet and hips and then extension made by way of the head*.

Fig. 298. "*Apparatus for Forcible Correction in Pott's Disease*." The table represented is about eight feet long. At the foot are two ankle straps, into which the feet are fastened securely. At the head is an upright standard, through which a screw shank about two feet long, at the internal end of which is a head and shoulder fastening device. The patient is placed face downward.

After placing in position, *before tightening on the traction a transverse hollow upper chest rest is placed into position*; this is destined to raise the body about one foot from the surface of the table. *A large, solid pillow is placed under the hips; traction is then applied.* He now represents the body high at the buttocks and shoulders, with the *spine caved toward the table*. The limbs and shoulders are not touching the table, due to the *intense traction*.

After all is secured he has a half or semi *iron hoop*, which fastens to each side of the table and *makes a half circle over the body* to the other side. Running *through the center*, from above downward, is an *adjustable pad*, by means of *screws* which *graduated the height and consequently the power necessary to treat the various diseases of the spine*. The methods are clearly shown and no question can be placed on the intentions of the author. The ideas he wished to convey are clearly illustrated.

"The operation as performed by him (Chipault) consisted in *direct, traction upon the deformity*, and the *reduction of the kyphosis by pressure*, the amount of traction being estimated at from 60 to 160 pounds, and the pressure from 30 to 80 pounds. He reported 204 patients operated upon, with *two deaths within two days and three deaths at a period subsequent to the operation*. *Partial paralysis followed in one case, and in another case an abscess developed* shortly after the operation.

"The amount of force required is not so great as was recommended by Calot, as by using less violent measures the danger of damage to the surrounding structures may be avoided. The amount of force required should be determined by the yielding of the deformity, and two or more trials may be made before finally resorting to laminectomy.

"In performing the operation of forcible correction the patient is in the *prone position*. An anesthetic is given and the patient placed with the *face down* upon a firm table. *Traction is made upon the head* by means of a bandage or leather head support and *upon each extremity by the hands of assistants, there being five thus employed*. *Gentle downward pressure is made upon the deformity * * ** the deformity gradually yielding and the adhesions being broken.

"The *experience which I have had in this operation leads me to consider it an unnecessarily severe procedure, and one liable to be followed by general tuberculosis, tubercular meningitis, paraplegia, abscess, rupture of abscesses, rupture of the pleura and exacerbation of the tuberculous process.*"

Fig. 437 shows a *lever forcible correction* method. An upright is on the left side of the table, standing about one foot higher than the patient's body, who is lying on his side. From the top of this standard is a long iron rod reaching to the opposite side, from the inner third of which is a steel pad, although fastened

to the cross piece, drops downward. With this long lever great pressure can be exerted, hence *forcible correction*.

Fig. 438 shows another form of the table described in the paragraph above.

Fig. 439 is another modification of the above. Each of these has a different kind of *screwable pressure from above downward*. Each of these forms has *this apparatus adjustable to any portion of the spine*, and any height. Each *foot extension stretcher has a handle to turn, thus making the screw pulling device complete*.

Chiropractic Orthopedy.

Orthopedy is derived from two Greek words: orthos—straight, and pais—child. Its early use implied the art of removing deformities in young children. Its meaning has been gradually extended until it now means the prevention and curing of deformities in persons of all ages.

Chiropractic is from two Greek words: cheir—the hand, and praktos—done: done by hand; a hand practitioner, one who adjusts, repairs with his hands; hand fixing; so that *Chiropractic Orthopedy means fixing the causes of deformities in children and adults* by adjusting the causes by the hands.

The word Orthopedy has always been used in connection with surgery. Orthopedic surgery is a part of surgical science which uses mechanical and operative treatment for chronic and progressive deformities.

Chiropractic Orthopedy does not use mechanical appliances nor operative surgery, but teaches how to adjust the human machine so that Innate can right the wrongs done.

The appliances of Orthopedic Surgery consist of an innumerable variety of trusses, braces and supports, made to suit each surgeon's fancy to fit each individual case. Plaster of paris is largely used for fixation and reduction of deformities; it is made into bandages, splints, jackets and corsets. Traction and suspension are favorite methods of Orthopedic Surgeons, the former is done by weights, pulleys and screw stretchers, the latter by hanging the patient, thereby using the gravity of the body instead of weights of sand or other material. Forcible traction and suspension are even obliterated for the time being, but the pathological gibbous curves do not change their character, the vertebræ being carious and wedge-shaped and ankylosed, cannot be returned to their normal condition in so short a time.

A glance at the appliances and methods show that the trend, principles and feelings of the Old School are, that they have a fight on hand, they have to conquer and subdue a stubborn enemy. These same thoughts are rampant today in the medical profession, as a doctor of mongrel breed (medicine and osteopathy mixed) says in his circular that lies before me, "It was a stub-

born case, but we had the satisfaction of coming out of the battle victorious, having thoroughly vanquished the enemy."

Chiropractic Orthopedy does not look upon disease or deformities as an enemy that "must be stamped out" or "vanquished," but as a misfortune that needs assistance. It kindly and intelligently helps Innate Intelligence by removing the cause of his insane work.

Orthopedic Surgery is a part of Operative Surgery, and is divided into several branches, which carry out the same idea of conquering and subduing, viz.: osteoclasia, fracturing of bones; osteocampsis, bending of bones that they may be made straight; osteotomy, the dividing of tendons and muscles that are drawn with too much force, for the relief of deformity.

Chiropractic Orthopedy would remove all abnormal conditions that are causing the tendons and muscles to contract with too much force, thereby allowing them to relax, correcting such diseases as rickets, Pott's disease, wry-neck, hip-joint disease and spinal curvature, removing such causes that result in neoplasm, exostoses and ankyloses.

The delayed union of bones, ununited fractures, come under orthopedy. The old methods of trying to force the fragments to unite are many; the parts were resected, the articular ends spliced, temporarily secured with nails, ivory pegs, tendon or wire, then a number of sewing needles were introduced between the fragments, hoping to irritate them in producing callus for their uniting. Others tried exsection, uniting the ends in a staircase shape, or implanting them in each other and then suturing.

In all cases of delayed union of fragments from the lack of callus the Chiropractor finds the repair nerves that end in that region have been injured at the time of the accident, being pinched by the partly occluded foramen through which they issue, thereby impairing their usefulness. *Instead of treating the effects at the fracture, he adjusts the cause, freeing the nerves so that they may act and furnish the desired callus.*

Dr. Lorenz' method of resetting displaced hips in children under eight years of age has been freely published through the press. He has partly acquired one idea of Chiropractic. This "congenital hip-disease" has been caused by the obstetrician displacing the head of the femur in its socket during childbirth. Innate Intelligence not being able to replace it, of necessity makes a new socket, and by absorption does away with the one not used. Dr. Lorenz places the head of the femur in its natural position and Innate builds an acetabulum for its use. This is a great improvement over the old method which used the knife—went to the root of the matter (?). Finding no socket for the head of the femur, a cavity was bored with a sort of auger with teeth like a saw, and the head of the femur was put where it should have been.

The medical world has always looked upon deformities as being inherited or transmitted by such diseases as rickets, scrofula, tuberculosis and syphilis. *These pathological changes are but the results from an abnormal action of mental impulses; they contribute but little evidence or elucidation to an M. D. as to the real etiology.* The theories proposed under the head of heredity furnish material for a keen satire on the medical art. *To a Chiropractor such explanations do not explain.*

The Chiropractic Orthopedist is especially concerned with the mechanical workings of the human machine as a causative factor, in finding that its wrong working impairs its usefulness and develops deformities, *he is enabled to adjust the displaced parts that are the cause of the disabilities and abnormalities.* He is concerned, not only with the local disability called disease, *but more especially with the primary cause of a lack of coordination or absence of competent physical and mental abilities.* This Chiropractic advancement has been made possible by a study of Innate's handling of the nervous system in building and running the human machine.

It is the purpose of The P. S. C. to emphasize this aspect of Orthopedy by creating a chair for that branch of Chiropractic. With this aim in view, we have collected in Europe and America the most extensive and best selected collections of orthopedic pathological specimens in the world for the elucidation of this important feature of this school. It is of the greatest importance that we fully comprehend that the cause of all diseases and deformities is *in the affected*, and not in our ancestors; the former we can learn to adjust, the latter never.

It will be observed that Chiropractors have made great innovations in orthopedy by adjusting the cause of deformities instead of treating the distortion itself.

The Orthopedic surgeons conjecture that the primary cause of deformities is some one of the many diseases that they suppose to be hereditary.

The Chiropractor is able to demonstrate, in the majority of cases, that such diseased conditions as are said to be hereditary, as rachitis, scrofula and tuberculosis, are curable by adjusting the cause of those conditions, which are *in the individual and not outside of him.*

To make a success of orthopedy, we must combine manual skill with scientific knowledge of nerves, so that we may be able to adjust and put to right any displacements that cause abnormal building or deformities of the thousandfold different mechanical parts of that wonderful piece of organic clockwork—*Man.*

Briefly, *Orthopedic Surgery* is that branch of *Surgery* which uses any one of the many forms of appliances, apparatuses, machinery or mechano-therapy principles without end, for the purpose of *treating the effects.* If the case is one of lateral curvature, scoliosis, the traction machines and pressure are used to stretch

from head to heel, and use forcible measures to push the curvature straight.

Chiropractic Orthopedy is the adjusting by hand, of the cause of the deformity, be it prenatal, congenital or postnatal. *How much better to adjust the cause in preference to treating the effects by any one of a thousand methods.*

We have a counterpart to Orthopedic Surgery in the "*Modernized*" part of Chiropractic. In 1901 there was no knowledge of how to adjust the causes of prenatal, congenital and postnatal deformities Chiropractically. Since then this school has invested \$30,000 in selecting the best and largest osteological collection in the world. It was necessary to have these to study and precisely locate *the cause*.

To prove a counterfeit, the genuine must be in comparison with the spurious. The imitation in this instance is very crude and shows how little depth of judgment is being used by the counterfeiter. The *motive* was to imitate this distinct P. S. C. Chiropractic study—Chiropractic Orthopedy.

Your contrivance may be a trifle different from any other; you may even have patients for it, but the *fundamental principles of traction, extension and pressure are as old as Hippocrates, and, as such, are thoroughly protected by each and every "Medical Practice Act."*

I do not object to the use of such machines by anyone if they so choose, but I do strenuously remonstrate when this special branch of surgery is called Chiropractic. *It is not Chiropractic, never was, nor will be. No one knows better what Chiropractic is than the parent school. This school never has, nor will advise or teach the use of anything but Chiropractic. If rightly understood and learned, it needs no mixing.* The very fact of additions shows the mixer's knowledge of Chiropractic is not complete. A grand jury investigation in many countries, with these facts before them, could make a lawsuit a great probability. Now is the time your *Backbone* needs fixing. Can a traction or pressure machine stretch or force these stubborn facts as a part of Chiropractic before a jury? Prosecutor's evidence is complete to start with.

Each and every state has its surgical laws. *Every person practicing with and using the traction, stretching or mechanical pressure table or appliance, in any manner, is liable to that state law for the practice of surgery, as much so as if he had given medicine.* It is an open question how far Osteopaths, in many states, can trifle with this branch of Major Surgery.

Medicine is Medicine. Surgery is Surgery. *Each have their own definitions and rights which ought to be protected. A Chiropractor does not want nor need either. He does not need or intend to infringe or trespass, be it ever so lightly, upon the ground of either. If he does, it is because he wilfully wishes to*

practice deception or else knows no better. Either being sufficient cause for a practical lesson.

I have confined the above quotation to men of the broadest experience, who were teachers in orthopedic science—whose works, today, are standard.

Only those portions have been utilized which deal with the following principles: 1, *Traction*; 2, *Extension*; 3, *Counter-extension*; 4, *Suspension*.

More authors, in *The P. S. C.* library, could have been quoted, but these are sufficient to *stamp it with authenticity and reliability*.

I will now quote from such articles and books, or describe illustrations, that will describe the mock goods, that which has been attempted to tack on or splice on, as in grafting, that described above, as a part of this new science—Chiropractic.

The P. S. C. has been scientifically, independently, searching for the causes of deformities. The outcome is that unique study, *Chiropractic Orthopedy*. The advanced study of cause and art of adjustment is better than to retrace backward to the long-discarded methods.

A short description of the "Modernized Chiropractic" table was depicted a short time ago and will be of interest for comparison with the many foregoing illustrations.

At the head of the table, on one side, is a wheel which is to induce traction, the feet being firmly fastened at the lower end. A long mechanical arm reaches from the side of the table over the patient, to which is placed a vertical upright at the lower end of which is a pad. This can be placed at various angles and is adjustable. The object is to use slow, steady pressure force, so as to replace "Stubborn Seventh Cervicals." I would be ashamed to admit publicly that you could not do this by hand. *The P. S. C.* students are taught the adjustment of *every vertebra by hand*. *I have yet to find vertebra or ankylosis that cannot be adjusted by hand.*

The table is built with a hump in it to elevate the hips, which becomes a necessity so that when pressure is applied, from above it, it can have play to gradually press the spine flat to the table. The second picture depicts the pressure machine on both sides of the ribs pressing inward endeavoring and aiming to gradually force the curvature straight.

The statement accompanying the illustration says:

"In making correction, the applicator of the anatomical adjuster is applied at the proper angle to the spinous process of the seventh cervical vertebra, the head is engaged in the extension device, and by slow, even, painless traction the seventh cervical is caused to resume its normal position.

"In case of lateral curvature of the spine, slow, steady traction is exerted by engaging the shoulders and feet; the anatomical

adjuster brings pressure on the angle of the ribs, and at the same time the physiological adjuster is doing its part to increase nutrition so that the misshaped discs of cartilage between," etc. Sounds like some book on orthopedy, doesn't it?

This "applicator" is adjustable to any part of the spine. After carefully studying it and reading the above, *I see no difference in principle* between this method and thousands gone before. Those modes before were honorably called a part of surgery. No wonder the deepest thinking orthopedic surgeons have discarded these *threadbare methods* today because of their inability to adjust cause.

We are in receipt of a booklet entitled, "The Traction Couch for Disease Treatment."

Chiropractors do not treat disease. They *adjust cause*. These words are as different in meaning and application, as antipodal as a fish and a pipe organ. There were hundreds of machines designed and manufactured hundreds of years ago that, in principle, as the many above verify, *are today in use*, in any orthopedical hospital or supply house, for the purpose of "Disease Treatment." No progress in *Chiropractic* has been made by this invention. It is still in the ruts. *Chiropractors do not want to link hands with foreordained failure methods.*

"Mechanical Construction" of "The Traction Couch for Disease Treatment."

"The body of the machine is less than four feet, and is made of steel tubing, into which the *head and foot extensions* telescope when folding.

The head is engaged by padded straps over the forehead and at the base of the occiput. Shoulders rest upon strap support and are engaged by the curved crutch-like fastenings, passing under the armpits. The feet are secured by hooks and straps, giving a direct pull down the long bones of the leg.

"Traction is applied by the lever at the side which controls the bevel-gear mechanism, driving the ends of the machine outward, separating the body.

"The stretch is graduated along the body; can be applied to the limbs alone, from shoulder to feet, *from head to feet*, and in most any way desirable."

Compare this with the many descriptions gone before and see if "It is the only thing of the kind in the world."

"Among *Chiropractors* there has been a constant demand for this machine." *Students receiving their knowledge of Chiropractic first-handed, at the parent school, have no need nor fear that adjuncts will be pawned upon you. Machines sold are to pseudo-"Chiros" and not to those who have studied specific, pure and unadulterated Chiropractic at the parent school.*

"To the profession of Chiropractic especially the value of traction in the production of spinal extensions and muscular re-

laxation in the producing of subluxations, adjusting skeletal derangements, and relieving nerve impingement will be most apparent." Methinks the "nerve impingement" is mostly in "relieving" the pinched condition of pocket more than anything else. *Chiropractic and surgery mixed* has not drawn business. The "value of traction" is according to how little you know of Chiropractic. I have yet to see the orthopedical machine or apparatus made, using for its principle traction, or gradual pressure, that is one cent's value to a Chiropractor who is thorough in his knowledge.

"In the armamentarium of every Chiropractor 'the old medical idea was, and still is, with all that cling to the 'treatment' of disease," that it is an enemy that must be fought, driven out with all devilish arms, poisons and unmerciful machines that can be originated or invented. The more stubborn the disease, the stronger and meaner must the driver be. The honest Chiropractor knows that subluxation is a thing accidentally received, as such, sympathy and practical assistance should be extended instead of conjuring some machine that will make the intruder flee. Why try to drag forth ideas that progressive orthopedists are discarding? Leave them stay where experience says they belong. This article will open wider the breach of investigation. Can you withstand the shocks that are tearing holes in your walls?

The following letter is *one of many* on this subject received at this school:

"I am suffering with a growing out of the spine, 8th, 9th, 10th dorsal vertebræ, which was brought on by heavy straining work, the weight falling about this part of the back. Have been suffering about three years; have worn different forms of braces, including the Philo Burt brace, but all with but little or no permanent benefit. Have also taken osteopathic treatment. They cannot do anything for me with their method."

I answered, telling him if a normal, straight spine was what he wanted, to come; we would *fix* it. I explained to him that *the* cause was what had not as yet been adjusted. To make this or any other person *well* you must find *the cause* and then correct it, a thing all *P. S. C.* students, since the advent of Chiropractic Orthopedy, can do; will accomplish that which the entire past with its racks of torture have failed on.

True, there is more *temporary* money to invent a machine where the patient can be treated from *two to five years*. This is given as the average time by men who certainly know. More money in it to treat effects than to adjust cause. The school that gives *permanent* results is the one that continues to increase its business. These little points of honor to a science are carefully figured by prospective students.

Another article by a Chiropractor states: "Perfectly understood and practiced, this idea can be used at any time or place, for no mechanical adjuncts are necessary in adjusting the spine,

and those who use them have simply halted by the way. All the mechanical laws are employed in the workings of the body, and *the hands* can set them at work to correct mechanical derangements."

Would you like to attend school where you had to study orthopedic surgery, called "Modernized Chiropractic," and then ascertain, when in practice, that you couldn't use it, for fear of arrest for practicing surgery? *Evidence would be conclusive.* Sixty volumes on this subject in *The P. S. C.* library is at the disposal of any county attorney that wants to prove to a jury what traction, extension and pressure are and how applied. *The injustice to Chiropractic is what I will see corrected.*

A teacher cannot teach what he has not got the wherewith to teach with. It is impossible to teach *Chiropractic Orthopedy* without the use of an immense osteological collection. The traction couch is the substitution.

The success of The P. S. C. has proven that first-handed, genuine, pure goods, the kind without substitutions or counterfeits, are the kind asked for. The P. S. C. as a school is properly and thoroughly equipped and prepared to demonstrate and teach Chiropractic Orthopedy—the correction of the cause of deformities.

To sum up, let us see some of the differences:

The P. S. C. has the doughnut—these men see the hole.

Chiropractic adjustment has for its application a *quick, energetic, piano*, or typewriter movement. Orthopedic books advise the use of steady, gradually increasing, mechanical force.

Chiropractic means hand fixing. The application of any form of machinery is distinctly Orthopedic Surgery. One contradicts the other. The two together is impossible except to he who knows but little of either. The legal pill awaits he who will not learn. Chiropractic personifies and teaches life. Surgery represents stagnation or constipation. Do you need a pill? The legal machine will come your way, sooner or later, if you need it.

Chiropractic is *eminently successful in adjusting the cause of these deformities*, which was not, nor is today, thought of by medical men. Orthopedical appliances and all its principles aim only to *treat* the effects, thereby making continual dismal failures.

Orthopedic surgery is cruel, inhuman, torture, savage, barbarous, pitiless, unrelenting, hard-hearted, inexorable, harsh. Chiropractic assists Innate by adjusting the cause, thus is humane, forbearing, merciful, benevolent and beneficent.

Chiropractic is the product of today. Orthopedic surgery appliances of this counterfeit type are traceable to Hippocrates' time (460 B. C.).

One is distinctly *Chiropractic*, the other "Chiropractic Modernized" *backwards*.

Orthopedic surgery, as it stands today, represents the trials, troubles and tribulations of hundreds of men's minds and millions of dollars in experimenting to treat the effects. Chiropractic shows the exact science of adjusting the true cause of disease.

Conclusion—*Chiropractic Orthopedy*, from a "Modernized Chiropractic" viewpoint, would be like asking a German band to play pipe organ music; get lake white fish from a muddy river; a typesetter to build a boat; for butter and get oleomargarine; for lard and get cottolene.

Would be like going

To the Rocky Mountains for water lilies.

To Alaska for oranges and bananas.

To Great Salt Lake for fresh water to drink.

To Central Africa for the latest Parisian styles.

To the North Pole for steam heat.

To Iceland for watermelons.

To the Equator for a skating party.

To the South Sea Islands for Boston culture.

To an Indian camp for musical instruction, asking for *Chiropractic*, but getting a crude counterfeit, "Chiropractic Modernized." Which will you have?

Does Swindling Pay?

In Bishop's *"Deformities of the Human Body"* we have another authority who denounces the brutal treatment of machinery for deformities of the body.

In considering the entire body and its mechanical treatment, he says: "Hence we have a multitude of machines invented for the purpose of doing what they have never accomplished, in cases in which the mechanism needed might have been found in the body itself.

"Under these circumstances we need not be surprised that mechanism constructed in imitation of the rack, gallows, and sundry other combinations of mechanical powers, have been resorted to and applied to cure distortions, and are not only recommended, but actually used to this day, both in this country and abroad.

"The practice of stretching the trunk in curvatures of the spine has been more or less adopted in Germany, France and England, and is still in constant use.

"In order to replace the vertebræ, he (Pare) recommends that the patient be laid on a table, with his face downwards; he is then to be bound by passing towels tightly under the arms and around the thighs, the ends being left free, so as to be held by two assistants, one placed at the head, the other at the feet.

"Such were the views and the methods employed by Pare to restore the figures of the back." Chiropractors, with the much-paraded Dvorsky method, are behind the times. The towel pushing is hundreds of years old. Why not "Modernize something practical?"

"It is not the principal object of the author of these pages to direct especial attention to the *details of the particular means employed* in stretching the body, but to the ends aimed at by the surgeons who employed them; not to *what* machinery is used, but *why* it is used; not to how the body is stretched, but why and with what results. *If an examination be made into the effects of extending the body in the axis of its length with the view of correcting distortions of the spine, it will not be very difficult to demonstrate, in the first place, that it can never effect the object sought; and secondly, that the practice is not merely insufficient, but absolutely injurious.*

"Extension cannot effect a cure when the bones of the spine have assumed a wedge-like shape. It is clear that the extending principle must be altogether useless, to say nothing of the confinement, torment, and loss of health occasioned by this plan of treatment. Practitioners who pursue the extension system are probably little aware of the great amount of force necessary to accomplish its end, and the injurious consequences of force when applied to the soft parts.

"Sir Benjamin Brodie observes that no machinery ought ever to be employed for the purpose of elongating the spine and correcting deformity. There are, however, practitioners in the present day who make use of powerful machines, capable of overcoming ankylosed union of the diseased parts of the vertebral column; and it is reported that life has been sometimes sacrificed in the attempt.

"The author has simply, in this work, attempted to trace to their sources the failure of the various methods in use—to expose the empirical state of the practice abroad and at home,—and to lay down some rules founded on established premises as guides for future treatment. When we take a survey of the vile machines that have been invented, and considered the amount of torture inflicted by them for no useful end, that patients have been subjected, often for years, to painful restraint, have incurred expense, and lost much previous time, all of which has been borne with fortitude by the young and delicate, buoyed up by the fallacious hope of a happy result; and that muscles and tendons have been cut, and various mutilations inflicted on a mechanism so beautiful and so perfect as that of the human body, in order to attain objects which such means could never accomplish,—it must be acknowledged that this branch of surgery is in a most deplorable state. Almost every orthopedic practitioner has hitherto employed some favorite machine for the treatment of distortions. The author does not intend to propose any new machinery, either for stretching, pulling, pushing or propping the body; his aim being to dispel the illusion that such machines possess any value, but demonstrating their inefficiency in the majority of cases."

More authors could be added. The above is an authority and broadly quoted for the reliableness and thoroughness of decision. His clinical advantages have been large.

Incompetent Chiropractors try to tack the above unproven conglomeration and advertise it as a part of Chiropractic. Their knowledge of the latter is minus and largely constricted, thus swindling people, making them think they are getting Chiropractic. Does swindling pay? If you are in doubt as to the standing of anyone, correspond with *The P. S. C.* and find out before spending time, money and effort to condemn Chiropractic.

DOES EDUCATION PREVENT DISEASE?

"Can the Innate or Educated *mind* be educated so as to ward off disease?" is a question we are often asked.

The Innate mind represents the addition of generation after generation of thoughts stored away. Our educated brain is capable of expressing a portion of Innate in voluntary form; that is, at the command of our external man, and is the expansion that takes place from birth to death. Take as an illustration any well educated man. You look upon him as a person who uses good, clear judgment, who goes to the bottom of any investigation or matter presented. You consider him a most typical virile individual.

His Innate was educated before he was physically born; his intellectual brain has been educated at many schools and colleges, and has been sharpened by the brightest wits in the United States Senate and House of Representatives. Although he represents one type of the greatest men of today, he might have a slip upon the curbing—subluxation follows and he is as liable to have rheumatism as an everyday laborer. The king in his castle is no more exempt than the poorest renter. Professor Harper, President of Chicago University, having, at his beck and call, the greatest university in America, was subject to a vertebral subluxation that produced cancer (a disease not considered "incurable" by the Chiropractor, because he knows cause), the simple cause, not being known to the entire medical profession, his death occurred in common with many poor sufferers. His mental education did not make him, physically, any higher.

Innate is no respecter of circumstance—regardless of person, nation, color or sex, and will maintain an equilibrium if given a chance—minus impediments.

Chiropractors cannot dictate to Innate—nor do they *need to*. The man who is *treating effects* needs to try everything—anything—that offers a substance of a shadow of a health returned but, on the reverse, considers her our superior. Her advice is given full sway, by adjusting that which is an impediment or obstruction in her path. When this is accomplished, "Nature," "Instinct," "Subconscious Mind," "Vitality" will be but acting normally—Health.

FALLACIES.

(Lecture delivered by L. H. Nutting at the Universal Chiropractors' Association meeting.)

Having spent days and hours in trying to ascertain the reason why your program committee invited me to read a paper before this association, I have become convinced that being an outsider, you expect me to give you the situation as viewed by such; and to tell you why Chiropractic is not the established mode of removing conditions that produce pain and disease. The American people have this one lesson to learn, and it must be indelibly impressed on their minds, never to be effaced. Disease is not a misfortune, but willful ignorance and death, except from an accident, is, literally speaking, committing suicide by the slow poison process for the benefit of your medical family physician.

Chiropractic has not yet become fashionable. The American people are "faddists," to go to a Chiropractor and have acute diseased conditions removed in twenty-four to forty-eight hours is entirely too tame for them. It does not consist of enough notoriety to suit the average mortal. A person who is ill and suffering pain wants some notoriety as a recompense, and the more the better.

They want an ambulance to call at the house, take them to some hospital, want the whole neighborhood aroused, standing around with long faces and tear-dimmed eyes, and drive away when the emotion has reached the meridian, even if they have to return the next day in a hearse, when they will again be the recipients of the sympathy of their friends and neighbors, and with pomp and style proceed to the cemetery enshrined with the choicest flowers. I say they prefer this rather than to be guilty of going to the Chiropractor or call him to their home and live without the notoriety.

It is too economical to suit the style and tone of the present age and generation. Who would have the temerity to relate to their circle of friends that they had the conditions removed that produced cancerous growths, rheumatism or tuberculosis for \$40 or \$50, and at home? The very idea! This is only enough to pay the railroad fare to some high-toned sanitarium, to say nothing of the board and room, nurse fees and medical attendance and drugs. Why, anybody with only an ordinary amount of common sense would know at once it is impossible. The public verdict is, that they never had any of these diseases; of course not; and are so assured by their family physician.

If your Chiropractic adjustments were attended with dangerous results to the patients you adjust, your infirmary would be crowded to overflowing and you would have to turn patients away daily.

It is entirely too simple for those persons who imagine that disease is caused by a bunch of microbes sent from heaven or

some mysterious place and that a doctor has to be clothed with supernatural power in order to be able to relieve them.

A patient comes to you suffering from diseased conditions, you examine them, and after analyzing the case, your experience has taught you that you can give immediate relief, and you are sure that you can, in a short period of time, restore them to normal condition, and you tell the patient: "Yes, we have had cases of this kind before; no doubt, with a few adjustments, you will gain your normal health." The patient is surprised and looks with that expression of disappointment on his or her face, and mentally exclaims, "Is this all there is to it? I have been told that I was in a precarious condition." A medical M. D. would say, with tears in his eyes, that your case "is a very serious one and the chances for your recovery are extremely few. I hardly think I can give you any relief without a surgical operation, but if you refuse to go to the operating table, I will do what I can for you with the counsel of two or more doctors who know just as much as I do and may, after two or three months, be able to relieve you of pain, but you can never expect to be well again."

The patient is impressed with this doctor's brilliant knowledge and they make up their minds that the doctor is right; they know that they are sick and in pain, and are glad that the doctor knew something of their conditions. Then they wonder why it is that these "fakirs" are allowed to put their opinion against the judgment of a regular full-fledged medical student who has spent three to six years in some medical college. But here is the opposite proposition: Your telephone calls and you are summoned to a cottage on the hillside, where lies in agony the bread-winner of the family. He cannot afford this gush and display of calling the chief drug dispenser, and he pleads with you to help him, so he can assume his duty in earning bread for his family. Here is your opportunity. Get a fine ambulance, drawn by not less than four stylish caparisoned horses, have this outfit decked in holiday attire, with flags and banners containing appropriate Chiropractic mottoes. Let the public know that this is no funeral on cortege bent. That you are rejoicing with joy that you have been given an opportunity to save a human life.

Go after him daily, and after his adjustment and the necessary rest, send him home and instruct your driver to take a different route each and every trip. Keep it up every day, if it takes weeks or months, until this man is well. The longer you are at it the more places your ambulance will have to call.

One more and I am done. Do nothing by halves, never take a case unless you are absolutely sure of relieving. The few dollars you may get for adjusting a patient without giving relief will cost you \$5.00 for every one you get. Be sure in each case, and when you commence, never give up, and insist that the patient remain with you until well.

The Science of Chiropractic has had this for a hard and tedious voyage. You started out to cross the river of experience

with no gaily bedecked steamers, with no bands of music, but in a flat boat without sail or rudder, with poles and sticks such as you had at your command; you pushed your way against the rushing current of adversity. You have reached the shore and have waded waist deep through the mud and mire of the swamp of despondency. You are now in the peaceful valley among the trees and flowers, all ready and fully equipped to commence the ascent of the hill to success. Let your deliberation be of such importance that in the ascent you will make no false slips, but will climb slowly and surely until you reach the top. There unfurl your banner to the world, emblazoned on its folds in letters of gold, "*To Chiropractic belongs the honor of discovering the fountain of youth.*"

CHIROPRACTIC—ITS SUCCESS.

(Toast delivered by "Uncle Howard" Nutting at the banquet given by *The Universal Chiropractors' Association* at Turner Hall, Wednesday, September 19, 1906.)

"I can see my finish, your presiding officer is determined to force me to intrude on your time and patience until I lose your esteem, if I ever had it. But as there is no escape for me, except to play the part of a coward, I am going at it to the best of my ability.

"Ever since the beginning of time it has been the custom after great and glorious achievements, following the accomplishment of any difficult work, where the victory was good to the public, it has been celebrated by the successful contestants by feasting and merry-making.

"So you have completed the organization of The Universal Chiropractors' Association, are celebrating the consummation here in our beautiful city of Davenport, around this banquet table. You have accomplished a grand and noble work. You are not banded together for the purpose of monopolizing the art of removing the conditions that produce pain and disease, but you are joined in this unselfish brotherhood for the sole purpose of alleviating pain and suffering, for bringing back the glow of health to the pallid face. To lift the fallen, assist the weak, and to battle with the strong, to crush and demolish the monopoly now holding the lives of suffering humanity in their avaricious hands, to do or *die* as they *shall dictate*. Your interests are one and identical. You will hereafter be as one large family of brothers and sisters, the offspring of "Dad Chiro." You will not only watch the interests of each other with jealous care, but will protect each other against any power that can possibly be brought to bear; your methods of proceeding are, no doubt, mapped out at this convention, and I would not presume to undertake to suggest to you any *path* you are to follow.

I will say, however, that there are *paths* which you must shun if you would be successful. These are *Allopath*, *Homeopath* and *Osteopath*. They are all *paths* that are being deserted by the scientific, philosophical, progressive, thinking men and women. These paths I have mentioned wind in and out, around and through tangled and poisonous vines and bushes of thorns, over yawning chasms and around the corners of jagged rocks and under great trees where lurks the venomous moccasin, where grows the poison ivy and hangs suspended the huge boa constrictor; and fortunate is he who makes the journey of either *path*, who comes out into the sunshine of the peaceful valley of health without carrying the unsightly scars of lacerated and wounded flesh caused by the thorns and keen-edged stones, or, with drawn, pinched face and expressionless eyes, the effects of the poison encountered, or a twisted and deformed body by the coils of the boa constrictor. We see in our daily press, every day, victims of these enemies of human life and happiness, who have been following these *paths* for years, who persist in this dangerous habit. What is there so fascinating around and about these dangerous paths, to say nothing of the odors they encounter in their way? What is it? This is the problem you, as an association, will have to solve, and then take measures to break the spell that holds such an influence over them.

Do you ask for a suggestion as to the possible reason? *It is a lack of stamina and will power; they need a Chiropractic adjustment*, so they will be brave enough to face the music.

They are in the same predicament of a lady I once knew, but who since taking a few adjustments had changed materially. She would not go in the street because she did not have a hat of the latest fashion; she feared the taunts and sneers of those who had the necessary to procure the hat in season and pay for it after the season was over. So it is with the person I have mentioned; they can wind around the various paths, their friends sympathize with them and share the grief and pain, and pay for the enjoyment at their leisure.

They are afraid to pay cash for their ticket on the Chiropractor's overland special, which runs through fragrant fields, by babbling brooks and crystal springs, where they can ride quickly, easily and comfortably to the beautiful city of health, at the rate of sixty miles an hour, because they would miss all the enjoyable features of disease and grief they encounter by the other route.

I am a firm believer in the principles of Chiropractic. I am very peculiar in that I never accept anything as a fact without due deliberation and consideration, in the slang of the day, "*You have to show me.*" I visited the infirmary at Second and Brady street in this city the first time, on the invitation of "*Dad Chiro,*" to see some friends who had written me concerning the merits of Chiropractic. I answered them, that I condemned nothing without investigation. They came, were taking adjustments, and

were ashamed to even let me know that they were here. I remember, especially, A. T. Rayburn, from Montezuma, Ia., a cousin of Mrs. Nutting, who was here three days before myself or wife knew of it. After the third adjustment he was brave enough to show himself at our home. I asked him what was the method employed. He answered, "I know not, all I know is that night before last is the first time I have been able to lie down and sleep since the Civil War." This was wonderful, and I commenced to keep tab on the patients; saw them come and go, in wheel chairs, on crutches, and then see them going to the depot to return blithe and gay, with the firm and rapid stride, the picture of health and happiness.

I have been shown, and I know beyond the shadow of a doubt that any conditions that cannot be removed by the science of Chiropractic, cannot, and never will, be removed. I have known cases, under my own observation, where a party only took a few adjustments, was influenced by outside forces to desist, that the effects of those adjustments became discernible after six months has elapsed and the party recovered. I have watched the progress of this science through all the dark and gloomy days which it has passed and have done all in my power, and when needed, I shall ever be found putting forth my best efforts for this science, not for glory, honor or pecuniary compensation, but for love and sympathy for my fellow man. If what I have said or done, or what I am able to do in the future, will be the means of saving one life or alleviating the pain of one sufferer, I am satisfied. I am not afraid, the opposition have exploded their shells and I fear not their empty guns. I shall continue to stand for Chiropractic as long as I may have health and strength; and when this fails, I will call on B. J. Palmer and go at it again. May you all be eminently successful in your chosen vocation and be assured that you will always have one friend outside of your association, is my best wish.

ANATOMIES VERSUS CHIROPRACTIC.

We are all well aware that the teachings of medical books are not that of Chiropractic.

Samuel Cooper says on page 354: "Every kind of joint is not equally liable to dislocations. Experience proves, indeed, that in the greater part of the vertebral column luxations are absolutely impossible, the pieces of bone being articulated by extensive, numerous surfaces, varying in their form and direction, and so tied together by many powerful elastic means, that very little motion is allowed. Experience proves, also, that the strength of the articulations of the pelvic bones can scarcely be affected by enormous efforts, unless these bones be simultaneously fractured."

On page 365: "The large surfaces with which these bones support each other; the number and thickness of their ligaments; the strength of their muscles; the little degree of motion which each vertebra naturally has, and the vertical direction of the articular processes, make dislocations of the dorsal vertebræ impossible, unless there be also a fracture of the above mentioned processes. Of these cases I shall merely remark that they can only result from immense violence, that the symptoms would be an irregularity in the disposition of the spinous processes, retention or continence of the urine or fæces, paralysis and a motionless state of the lower extremities, the effects of the pressure, or other injury, to which the spinal marrow would be subjected. Similar symptoms may also arise when the spinal marrow has merely undergone a violent concussion, without any fracture or dislocation whatever; and it is certain that most of the cases mentioned by authors as dislocations of the lumbar and dorsal vertebræ have only been concussions of the spinal marrow, or fractures of such bones."

"The os occipitis and first cervical vertebræ are so firmly connected by ligaments that there is no instance of their being luxated from an external cause, and were the accident to happen, it would immediately prove fatal by the unavoidable compression and injury of the spinal marrow."

J. L. Petit mentions a case of a child being instantly killed by being lifted by the head.

C. Bell relates a case and remarks: "Patients can hardly be expected to survive mischief of this kind, when the transverse ligament is broken and the process dentatus is thrown directly backward against the medulla oblongata, the effect must be instant death."

A. Cooper remarks: "In the spine the motion between any two bones is so small that dislocation hardly ever occurs, except between the first and second vertebræ, although the bones are often displaced by fracture."

Kirkland observes: "There are some luxations which are far worse injuries than fractures; of this description are dislocations of the vertebræ, cases which indeed can hardly happen without fracture, and are almost always fatal."

Stimson says: "The possibility of the occurrence of pure dislocation of the lumbar vertebræ, which has long been in doubt, because of the close interlocking of the processes and the strength of the ligaments, is proved by two cases collected by Blasius and also by two others, in which there was present associated, but unimportant, fractures of some of the processes."

This same author, speaking of dislocation of the atlas from the axis, says: "Dislocation forward or backward is possible only after fracture of the odontoid process or rupture of the transverse ligament, or by slipping of the process beneath the ligament."

Gerrish sums up this question by saying: "Simple dislocation between two vertebræ is, therefore, almost impossible, unless, perhaps, in the cervical region, where the surfaces of the articular processes are more nearly horizontal."

Gray asserts, under the head of surgical anatomy, "The ligaments which unite the component parts of the vertebræ together are so strong, and these bones are so interlocked by the arrangement of their articulating processes, that dislocation is very uncommon and, indeed, unless accompanied by fracture, rarely occurs, except in the upper part of the neck. Dislocation of the occiput from the atlas has only been recorded in one or two cases; but dislocation of the atlas from the axis, with rupture of the transverse ligament is much more common; it is the mode in which death is produced in many cases of execution by hanging. In the lower part of the neck—that is, below the third cervical vertebra—dislocation unattended by fracture occasionally takes place."

These medical writers refer to complete luxations of the vertebral column—they know of no other. Such rarely occur without fracture, and instant death is the result. In this we fully agree.

A Chiropractic subluxation is where the articular surfaces of any one of the fifty-one spinal joints have been partially displaced, and not usually accompanied with fracture. The replacing of these subluxated vertebræ is an easy operation for a Chiropractor. When we refer to luxations of the spine, we speak of those which have been only partially displaced.

MOTOR-SENSORY OR AFFERENT-EFFERENT NERVOUS SYSTEM?

A new foundation and superstructure has made Chiropractic what it is today—a distinct science. To supply this new building meant a new nomenclature, those which were in accordance with its teachings—no "twaddle" for *The P. S. C. M. D.* and *D. O.* terms are superstitious.

The terms "sensory" and "motor," when applied to nerves, have been used to state the function. Motor nerves have no motion, but impulse, passing through them, acts upon the tissue cell, meaning the continuance of molecular change. That which creates an impression upon the peripheral of an afferent nerve fibre is not "sensation" until so interpreted by mind. The nerves sense nothing, therefore, are not "sensory."

Paralysis represents the impediment to brain motor impulses, not a nerve paralyzed, but its inability to convey that which makes motion. In abnormal "sensation" the ability of nerves to receive impressions is not destroyed, but its control in being able to deliver them to brain is minus.

These words are misnomers and were named before their functions were intelligently understood.

That which nerves carry is "sensory" or "motor" in expression, but they are an Efferent and Afferent Nervous system. "Sensory" and "motor" is what they convey when interpreted or expressed.

MEDULLATED AND NON-MEDULLATED NERVES.

Two brains control functions of the body. Each has its set of nerve fibres. The set which expresses the Educated mind is covered by white tissue, fatty in consistency—the medullary sheath. This shield is an insulator in function.

The Innate voluntary brain has no fibres sheathed. The discrimination is to avoid crossed wires or intermingling of impulses.

The various functions, representing impulses of each brain, cannot short circuit within itself, yet either could or would intermingle with those of the opposite. Innate, during foetal development, sheaths the fibres of the smaller bundle, thus using discerning and economic principles.

Although brief, the above is the first article which has offered logical reason *why* the Innate body builder provided one set with sheaths and the opposite not. To state (as the M. D.'s and D. O.'s do) that these are the result of "reflex action" or "sympathetic results" does not intelligently attain the level of the wisdom performed.

LEADERS OR FOLLOWERS.

Like almost every other subject the one allotted to me for comment and elucidation has a number of viewpoints from which it might be considered. In fact, it fairly bristles with them. If given to a young man between twenty and thirty years of age, of steady habits, fond of domestic life, and especially if presented to his attention in the spring, when, as Tennyson has so trippingly expressed it, "A young man's fancy lightly turns to thoughts of love"—such a young man, like some of my fellow students, whose names and numbers I could mention, would naturally and blamelessly contemplate it from the viewpoint of matrimony.

The burning question with him would be, "Which of the two positions, leader or follower, will I necessarily occupy after the marriage vows have been spoken?" "Will I lead, or follow, in all of the affairs of life which will thereafter revolve about the domestic hearthstone?" "Which position will bring about the greatest success and most happiness to both of us after the minister has made us one—I, of course, being the one?"

This is, indeed, a serious question, and one demanding much thought and consideration. If this young man were only in a state of mind that would permit him to take friendly and sincere advice, I would like to suggest (leaving my own experience wholly out of consideration, and basing my opinion entirely upon the opportunities for observation that I have been afforded by nearly forty years of professional life) that he may very masterfully lead the lady of his choice to the altar, but after this exhibition of his generalship, it will take more tact, skill and strategy than the average man possesses to enable him to maintain the perilous position he has placed himself in. Why? Because his better half, previous to the marriage ceremony, has been revolving the very same questions in her own mind, and has reached a conclusion which it is unnecessary for me to state before such an intelligent audience as I see before me.

I might go on indefinitely, mentioning the particular view of my subject that would be taken by the scientist, the philanthropist, statesman, minister or physician, in short, the personal view of the representatives of every class and condition of mankind, but it would end only in the discovery that all men from necessity are either leaders or followers. Which class each one selects to affiliate with depends altogether upon his hopes, ambitions and environment.

Man's ambitions too often override his judgment and lead him to pose as a leader, when, in fact, his qualifications, at best, fit him only for a follower and a very indifferent one at that. But his mistake is soon discovered either by himself or by his friends, because genuine leaders, like poets, are born and not made.

On account of the conspicuousness that attends brilliant leadership, many thoughtlessly conclude that the position of a follower is much inferior to that of a leader. But this is a great mistake. To insure the successful issue of every worthy endeavor, followers are as necessary to leaders as the main body of an army is to the advanced division which has captured a strategic point from the enemy which must be held at all hazards to make the victory complete.

The only real difference between a successful leader and a worthy follower is that the former is especially qualified by mental endowment to make original investigations and discoveries, while the latter is better fitted for maintaining and propagating the newly discovered truths in all of their original purity. Without their hearty co-operation the roughly outlined gem of a new truth would never be discovered, extracted from the bed of ignorance, falsity or superstition in which it lies. Cut and trimmed by the sharp tools of criticism and debate, polished by the hard whirl of practical use and experience and, finally, placed in its appropriate niche in the galaxy of sister truths, which have been rescued and preserved in a similar manner. Mind you, I am

speaking now of only the genuine type of leaders and followers. I am painfully aware that there are false and incompetent leaders and unworthy and vacillating followers. There are leaders who are a detriment and handicap to every cause they espouse and there are followers whose support, in time of need, is of no more value to the cause they claim to represent than is a broken rudder to a ship in the path of a storm.

But what of Chiropractic, the youngest and handsomest child of the household, who is forging ahead with such long and rapid strides that he has already excited the envy of the young members of this illustrious family and filled the minds of the older ones with fear and consternation?

It is not necessary to possess the mental acumen of a Sherlock Holmes to determine where his rightful position is. Look at this lusty youth! Watch his motions! See how free and energetic they are! Observe his spinal column! Verily, it is a thing of beauty and a joy forever. It exhibits no abnormal curves; there are no subluxations to interfere with the full, free and forceful expressions of his Innate Intelligence, neither is he handicapped by erroneous and useless ideas derived from "Educated Foolishness." He evidently is not only a born leader of the truest and strongest type, whom it is an honor to follow, but one who possesses physical and mental qualities which will enable him to maintain his exalted position indefinitely against all aspiring rivals.

But, although he will never be dethroned, to enable him to accomplish results that are at all commensurate with his ability, he needs the support and assistance of intelligent, strong, willing and earnest followers and the more of them the better. There can never be so many that he will be unable to provide a place of trust, responsibility and honor for each and every one.

This zealous and ever growing band of followers must be comprised of the graduates of *The P. S. C.* and other recognized schools, as they not only thoroughly understand what constitutes the basic principles of pure, unadulterated Chiropractic, but possess the knowledge, skill and aggressiveness to prevent them either from being stolen by jealous rivals or from being contaminated by the interjection of false and erroneous ideas.

In conclusion, I feel that it is neither an idle boast nor an exaggeration of the truth to say that, without question, Chiropractic is already not only the leader in all of the essentials of the life science, but that it is supplied with enough germinal vesicles to enable it to hold this advanced position until physicians of all schools acknowledge its supremacy.

How soon this medical millenium will appear will depend upon the harmony and unity of aim and purpose which is displayed by its qualified, representative followers. For a leader there could be none better adapted to fill that distinguished and arduous position than the one who now occupies it.

Next to an ideal leader the most important thing is a united band of followers who, in turn, also become leaders to the extent that, by argument and demonstration, they are able to convince those with whom they come in contact with the truths and justice of their cause.

In all successful reforms and movements the followers seem to be imbued with the same intrepid and indomitable spirit which is exhibited by their leader, and my observations convince me that all genuine Chiroso are no exception in this respect.

In all references to the elements which are depended upon to support and advance Chiropractic, there is a very important one, in my estimation, which I have not heard mentioned.

This is the silent but powerful vote from the casting of which no American citizen will ever be deprived. Don't neglect to exert every legitimate effort to secure its influence. It is the most desirable ally you can possess. At the crucial moment, when the interests of Chiropractic are threatened by adverse legislation, it will be of more value than gold and more persuasive than the "man behind the gun."

There are only two sources which can supply this much needed one and that is the converted Chiropractor who knows by experience the value of Chiropractic methods and the truth of its claims. While the supply of votes from this source is reliable and steady, it is small compared to that it is possible to derive from that other source—the lay public—the people who have never heard of this new science, but who will give it their support as soon as they can be made to understand it.

The laity, as never before, are intensely interested in all matters pertaining to health and the removal of the cause of disease. The proof of this statement is found in the great number of health journals, good, bad and indifferent, which are subscribed for and read by all classes of people in every state and community. Read, did I say—yes, *read*, and this is the best part of it, for it furnishes the cue for us to go on and feed their hungry minds with the kernels and grains of fresh, new truth in place of the empty chaff which most of them are now receiving.

We must inaugurate a campaign of popular education and let the people everywhere know what Chiropractic really is and what it can do. You must write and explain and continue to write and explain until the principles of this science are thoroughly comprehended.

If you cannot gain access to the pages of periodicals already published you must start one or more of your own, but it must be of a purely educational and philosophical character, from which all controversy is eliminated. If this is done I am sure the effort will be successful and the reward, in the form of a rapidly increasing number of sincere disciples and adherents, will be great.

G. H. PATCHEN, M. D.

WHAT I DON'T KNOW ABOUT CHIROPRACTIC.

Lecture delivered by "Uncle Howard" Nutting at *The P. S. C.*:

I have not the slightest idea what subjects you wish me to express, much less what you expect me to say. If you desire that I tell you what I *know* about Chiropractic, and I am well aware that this subject is uppermost in your minds, I can express it in three words: "It is it." (Applause.) If you are listening for me to tell what I *do not know* of this science, that is another proposition, and I venture that there is not a person in this lecture room, not excepting your learned teacher, who probably is as well versed on this subject as any one in the world, who can tell what he or she does *not know* of Chiropractic in a week by talking glibly ten hours a day. (Laughter.)

You are acquainted with the basic principles of this science and it may seem that there is little more to learn, but let us reason and consider that you are yet on the back pages of the primer. Comparatively speaking, you are able to spell and pronounce words of one or two syllables and, like a child thus far advanced, are able to carry on quite a conversation and convey ideas in words, sufficient for his needs; so you, by the knowledge you have acquired, are able to relieve a vast amount of suffering and perform many wonderful deeds.

I am aware and pleased to note that the science has made great advancement in the last two or three years, but to the outsider, such as I, it seems clear that you are yet far from the apex of knowledge of the greatest and most wonderful science. It is probable that you are farther advanced than the public has knowledge of; if so, what I say will be received with smiles and derision, but if I am behind in your advancement what must be the status of the public, who have never heard a lecture or investigated the subject at all?

Let us see where we are at. Can you analyze the cable of nerves issuing from the spine through one foramina of the vertebral column? Have you the ability to show by a diagram wherein each cable of nerves are locating the different systems, viz.: motor, sensory, calorific and all other strands? Can you tell by the character of a subluxation *which* system is impinged without tracing from the diseased condition at the extremity of those nerve fibres? Will you explain, by examination of the atlas, whether or not the individual is insane, and if so, what part of the brain is an abnormal condition, thereby proclaiming what line of thought is irrational?

Can you successfully determine, by examination of any subluxation, the nature or stage of condition existing at the termination of nerve fibres passing through the foramina at this point? Can you, to a certainty, determine by examination of the vertebral column, *whether or not* the subject is suffering from tetanus

without other evidence? Can you successfully demonstrate, by examination of the vertebral column, whether or not the subject is suffering pain, or locate the part diseased solely by this? Can you read the vertebral column like a book, locating in each and every instance the diseased conditions, where located, and the stage of these conditions?

Would you undertake such a task and swear by it in any *single* instance in any one of the many cables of nerves issuing from *any one* of the foramina? Can you explain why swine are subject to all diseased conditions of the human family except those of the stomach, which is unknown?

If your answer is "Yes" to these, you are further advanced than the public gives you credit for, and no time should be lost in proclaiming that you *do* know and *can* successfully determine conditions as mentioned.

If you answer "No," then it is necessary for you to burn midnight oil and lie awake nights until you *can* prove them—*by the Science of Chiropractic*. (Applause. "We won't have mixed goods.")

You can pose as a professor of Chiropractic when you are able to analyze each and every cable of nerves as they issue from the spine so that you may determine, unfailingly, by the subluxation, right or left lateral, or posterior, what particular set of nerves are impinged and determine *then and there* the diseased condition, where located, the nature and stage of the condition *without further evidence*.

You will discover nerve fibres that send impressions to the brain, of taste, smell, sight and sound, so that by vertebral examination, *blindfolded*, you may state *at once* whether the subject is defective in any or all of these senses and which one or more, *without* questioning or *diagnosing symptoms*. You will be so proficient as to keep the growth of the hair on the head in a natural and normal condition and, by adjustment of proper character, grow hair on the baldpate and beard on a smooth face and will, by careful and persistent study of the two nervous systems, show *why* the male is favored with a beard *to* hide his homely face, and the female is deprived of it so as *not to* hide her beauty. Why one scalp is clothed with silken tresses and another is scantily clothed with hair of abnormal texture. You will determine these, *not by symptoms* or visible means, but *by examination of the vertebral column*.

Drop the attempt to name symptoms which are never alike in different persons. When asked the condition of my neighbor, who is suffering from some abnormal condition, I want to be able to answer correctly in a way which can not be misunderstood. Symptoms may have as many names as professors diagnosing the case. When I answer, "My neighbor is suffering from nervous prostration," what does it explain? *Nothing* but that he is sick. Should I answer, "He has rheumatism," it implies *nothing*

but that he is in pain. If I replied, "Cancer," it only tells that he has an ugly sore, that is all. Let us be done with this quibbling. (Applause.) When any of my family or a neighbor is in abnormal condition I want to know *what* and *where the cause* is, *not* the symptoms. Then I can answer intelligently—a left lateral subluxation of the sixth dorsal or right lateral of second lumbar, or where the existing causes are, give it out straight. Not "A. P.," "D. P.," "G. T.," or "Go See," but the cause and location in *plain English*. I want the world so conversant with Chiropractic that they will, by answer given, be able to determine the location of distress or excess heat as quickly as they would if I informed them that my neighbor had sprained the left ankle or broken his right arm.

When you reach this elevation in the science of Chiropractic, you will be able to convince the most skeptical and prejudiced mortal that *Chiropractic is a science* and can be successfully demonstrated. As fast as you discover that a certain impingement produces a specific diseased condition to a certainty, tell it to the world and back it up with your reputation that such a disease never is, or could exist, without this subluxation.

You are *now* competent to trace the cause of any condition from effects; *then* you will unhesitatingly foretell effects from existing cause. But, as long as you undertake to name symptoms and then trace cause you are following the old-fashioned and primitive stagecoach in which are comfortably lounging the M. D.'s, who are contented and satisfied that they have the only mode of traveling on the road to health, as is proven to them by others following in their wake *and naming symptoms* which convey to the reasoning mind—nothing.

Turn out and *go by* this lumbering and uncouth vehicle. Lay out a *new* trail. You have no business on this thoroughfare. The right of way has been granted, not by the people, but by the statutes instituted in their behalf for guarding the public health. Open a new road, cut down the mammoth trees of prejudice. Clear away the undergrowth of ignorance. Lay your rails of *truth* on the solid ties of *cause*. Let every rail show the effect of the ties on which it rests, so that the whole line can be read like an interesting book from Atlas to Sacrum. Equip this line with modern coaches of Chiropractic philosophy and your stations will be thronged with tourists who will procure through tickets—will not ask for stop-over privileges, and the grass and weeds will grow in rank profusion where now winds slowly along the old leather spring coach driven by that worn out quarter-Julep and Calomel in the wheel, and Quinine and Lancet in the lead, which are goaded on under the lashes of Bluff and Superstition and is conveying to doom the unwilling but coerced slaves inside, chaperoned by a self-styled master, protected by Law. (Long applause.)

WHAT IS DISEASE?

This question is often asked by the thinking and unthinking alike, and has (outside of Chiropractic) never yet been answered definitely. Many theories have been offered, all of which seemed to have some plausible (?) point in their favor, but they are not of any practical value to a Chiropractor except as illustrations of the foolishness of the so-called "Medical Science." Occasionally we are amused by some one making a "discovery" (save the mark) claiming to have found the all-pervading microbe which produces or causes the disease—and an antitoxin to kill the microbe—which generally sends the patient, who takes this for a cure (?), to eternity.

From a Chiropractic standpoint, the cause is so simple that it is a wonder that it was not discovered thousands of years ago.

The Innate controls the body through mental force (which may be likened to Electricity), which is transmitted over the different nerves to every organ and tissue of the body. Sometimes this force is depleted (the reason why we are tired), when a twist is likely to cause a subluxation and the result is pressure upon nerves. Vertebral subluxations may also be the result of accidents, as violent falls, etc. If the nerve is only slightly impinged, the energy has a greater resistance to overcome, and the result is greater activity in those parts where these nerves are distributed. Should it be the calorific nerve, for instance, we have increased heat—fever; or slight pressure upon motor nerves would produce symptoms like chorea, shaking palsy, etc.

Should the spinal foramen be entirely occluded to shut off all circulation of forces, we find paralysis of those functions.

A Chiropractor analyzes the condition, where the subluxation exists, of what kind, and adjusts accordingly—and in a short time, if the wreck is worth while, he will have perfect health.

TYPHOID FEVER.

Mrs. N. E. K. allows me to say:

"My son Will, aged 17, came home sick on Saturday, August 10, and went to bed. On Monday we called our doctor, who pronounced his disease typhoid fever, and said he need not think of being out before three weeks; that 'the fever had to have its run.'

"On the following Saturday afternoon Dr. Palmer, by request, sent two of his students over to see him. They gave him no medicine and used nothing but their hands to adjust a displaced vertebra. Our doctor called in the evening, took his temperature and found only a slight fever; he said that was funny. He told us in the morning that his fever would rise toward

evening, and each day would be higher. The next morning he was surprised to find his temperature normal; he could not understand why such a sudden change. He did not know that a Chiropractor had replaced the displaced vertebra. In the afternoon the students gave him the second adjustment. The next Tuesday Will went to Davenport, a distance of six miles. Our doctor saw him over there and told me that he was out too soon; that he should have kept in bed for two or three days yet. We like the Chiropractic method and recommend it."

Are the above statements true? If not, the M. D.'s have an opportunity to prosecute Dr. Palmer for sending misleading statements through the mail, securing patients and money by fraud. Or did the M. D.'s make a mistake in diagnosis? If they don't know typhoid fever, are they not liable to make errors in diagnosing other fevers? An M. D. only needs to know that the patient has fever. He does not understand what joint fails to articulate properly, thereby causing a local excessive heat, creating a general fever. From a medical educational point of view, it is well for him to be well-read upon the morphology, pathogenesis and biological characteristics of the bacillus which his microscopical perception fancies to be the etiology. But it is necessary for a Chiropractor to know what nerves are impinged by a subluxated vertebra producing an inflammation from which the heat emanates.

In typhoid fever we are able to locate the physical representative of cause and adjust it. I will adjust free any case pronounced typhoid by an M. D.; provided he so states it in writing. They claim it is one of the self-limited diseases. There is more money in adjusting such than there would be in adjusting the displaced bone which causes it.

It is hard on the patient to be kept in bed for many weeks. It is also hard on the M. D. when a Chiropractor calls and adjusts subluxated vertebra.

CHILD-BED FEVER.

This disease is considered by medical men the most dangerous of any following child-birth. It is "so rapid in its progress and so fatal in its effects" that the average of death is one to three. It is thought "the most serious of all those diseases that follow labor." Lying-in hospitals consider it infectious, the larger portion of child-births being followed by puerperal fever.

One medical writer says: "The causes which produce the terrible disorder are not very well understood," and "the best treatment of this terrible disease is one of the greatest problems in medical science."

The reader will please observe, "the best treatment of this terrible disease." All schools treat diseases except the Chiro-

practores. Certain symptoms, when associated together, are named child-bed fever. These symptoms are treated. All therapeutical methods, including Osteopathy, treat the symptoms of puerperal fever. These effects are but the result of abnormal functions, a derangement of the human mechanism, and a disturbance of the vital forces.

Chiropractors find that these disordered functions are physically produced by occluded foramina in the lumbar region, by a vertebra being displaced during child-birth, causing pressure upon those nerves that are deranged. Instead of treating the symptoms, they adjust, put in place the vertebræ which they find slightly out of line. Therapeutical methods can only treat effects. Causes cannot be treated, they must be made right by adjustment.

The primary cause that produces the morbid symptoms known by medical men as child-bed fever, they do not know. They suppose the cause to be infection, one mother catches it from another. If this be so, where did the first mother catch it? Would not the same cause that produced it in the first also produce it in any other? Doctors can see symptoms, but are blind to their causes.

Child-bed fever is always caused by a lumbar vertebra being displaced during child-birth. Such is liable to occur in any obstetrician's practice, but he should know a subluxation and how to replace it. Acute inflammation is produced by the nerves being impinged in the occluded foramina. This excessive heat causes retention of the discharges which should follow child-birth, the stool and urine being scantily passed or not at all.

To illustrate the difference between treating the symptoms of child-bed fever and the adjustment of the cause of those derangements, I will give a cause.

A few years ago, on the day of February 5, I received a telephone message from Mr. Mc., of D., requesting me to take the next train, as I was very much needed. His wife had been given up to die of child-bed fever by three doctors. I told my students, before leaving what vertebra I would find displaced that was causing the condition known as puerperal fever.

I arrived there at 10 p. m. Her insane screaming could be heard a block away. Before going into the sick room, I told Mr. Mc. and the nurse what was wrong, where the displaced vertebra was and how I would replace it. Mr. Mc., being a mechanic knew at once just what I was going to do and the reason therefor. It took but a moment to show them the vertebra that had been wrenched out of place, and the next moment saw it replaced by the hands of a Chiropractor. Just then she coughed, and Mr. Mc. said, "The doctors say that she has tuberculosis of the lungs." I gave her an adjustment in the dorsal region, where those nerves were impinged which caused irritation, that kept up the coughing, and said, "Good-bye, tuberculosis."

In five minutes her hands and feet were warm instead of being cold, the cough gone, and the excessive heat (the M. D.'s fever), was absent from the head and trunk; her temperature was normal. By adjusting the spinal column to its normal position, I had taken the pinch from the nerves that were deranged by an impingement. These nerves were now able to perform their natural functions in a normal degree.

The next morning I found her asking for something to eat; she was very much better, although quite weak.

At 9 a. m., her old physician made a pleasant call and was agreeably surprised to find her skin moist, the temperature and pulse normal. He was nonplussed and could not account for the wonderful change and asked if I had hypnotized her. I replied that I had used no more hypnotism than a jeweler would in fixing a watch; that she had been injured during child-birth, and that I had only fixed what was wrong. He said the fever would return that afternoon; that the bowels would have to be moved by giving her something, and that she had tuberculosis of the lungs, which was incurable. I told him that there was no reason to think that the fever would return; that the stool would move all right, and tuberculosis she did not have; that she had ceased coughing. All the natural functions of the body were re-established and she made daily improvement without any further attention.

The human machine had been disabled and obstructed. When all parts had been properly adjusted, placed in their normal position, health was restored, because all functions were being performed in a natural manner. Mr. Mc. was able to say to his many inquiring friends, that his wife was very much better. The day before, they were expecting her to die, and her friends were sent for.

I saw this old physician do as all medical men do when visiting the sick. He was careful to take the temperature (degree of heat) by placing a thermometer in her mouth, an unhygienic practice, when we think of how many diseased mouths it had already been in. Then he judged of the action of the heart by taking cognizance of the pulse. This he had been doing with his patient for several days. The taking of the respiration, the pulse and temperature did not assist him in locating the cause. He was observing the effects, that he might treat them. This he would have continued to do until death ended the scene. A Chiropractor was called who adjusted a displaced lumbar vertebra, thereby saving a dear mother's life and disappointing a Regular, Old School physician so badly that two weeks later he refused to speak to the man who was able to locate a wrong and adjust it, which the old doctor had never thought of.

How differently he would have treated me if this prognosis, "She cannot live; she cannot get well," had been correct. How differently was my reception five minutes later by Dr. S., who

opened a bottle of fine wine and invited me to partake, and said, "You did a good job up there." The other physician, in order to extenuate his failure, said, "The fever had got to the highest, and would have gone down just the same if Dr. Palmer had not been there." It often happens, when a Chiropractor adjusts a wrong, that the doctor's "medicine begins to have an effect."

The above may seem absurd to the average medical man, but like many other recent marvels, it only seems wonderful because it is unusual. When the cause of child-bed fever becomes generally known and physicians learn to adjust the displaced vertebra, it will not look so marvelous. We have to nudge ourselves from day to day in this age of swift surprises and remind ourselves that nothing that is new to us can possibly be so remarkable as many things that have grown familiar.

Medical men diagnose a case, that they may know of the symptoms, so that they may be able to name the disease. Chiropractors analyze symptoms to locate the cause of our ailments. The M. D. injects an opiate to relieve pain by deadening sensation in nerves. The Chiropractor takes the pressure from the nerves that they may not be interfered with. The M. D. gives quinine to reduce fever. The Chiropractor releases nerves that they may convey normal amount of mental impulse, the normal degree of heat being the result.

Why not drop your fads and learn the cause of inflammation which produced too much heat, and the abnormal condition which came very near robbing a family of its mother? Why not get out of the ruts? Why not learn what is wrong and then adjust it, instead of leaving the injured part untouched? Why not learn to do something more than to take the respiration, temperature and pulse? You will never find the cause of ailments by using the thermometer, the test tube or the microscope. Why not quit old-time nations and do something to relieve the suffering?

The sick need help, not drugs.

The Allopaths and Osteopaths agree on diagnosis of fevers.

W. D. Halliburton, a standard authority on physiology, says, on page 595 of his book: "Heat is the result of the formation of carbonic acid, water, urea and other excreted products. The great source of heat is chemical action." On page 600: "Heat is produced by combustion process." On page 403: "Microbes produce fermentation by passing bacteria spores from one person to another."

Dr. A. P. Davis says, in his standard work on Osteopathy, page 284: "Remember that stagnation or stasis of blood produces chemical changes that result in pathological conditions that we denominate disease." On page 242: "In all fevers, the friction is caused by decomposition of the elements." On page

244: "Fever is the result of chemical changes in the elements; decomposition takes place, friction ensues, heat is the result."

Dr. A. T. Still, in *The Philosophy and Mechanical Principles of Osteopathy*, says, page 87: "Congestion of blood channels is followed by fermentation, which universally attacks all stagnant fluids of the body." On page 83: "You should know, as physiological reasoners, that phosphorus with oxygen and surface air, assisted by nerve and blood motion, aided by electricity, produces a union between the oxygen and phosphorus, and the addition of nitrogen, which occupies much cellular space in the body, produces the combustion known as fever heat."

The Allopaths and Osteopaths agree with the Old School physicians of the sixteenth and seventeenth centuries as to the production of animal heat, whether in excess or normal amounts, as attested by many old books in our possession.

Chiropractors hold that all functions of the body, whether normal or abnormal, are controlled by mental impulse. That nerves have their special functions to perform. That certain mental impulses are thermogenic, produce heat, whether too much or not enough, or in normal degree. That pressure upon these nerves deranges their functions. That child-bed fever is the result of nerves in the lumbar region being impinged as they emanate from the spinal cord through the intervertebral foramina.

The reader can readily see, from the above, that the opinions of the Allopaths and Osteopaths harmonize as to the cause of animal heat of any degree; so much so that they use the same text books. They aim to inhibit fevers; the one by drugs, the other by manual manipulation.

There is no resemblance whatever between Chiropractic and either of the above schools.

"TO CURE OR HEAL."

The public mind, in connection with Chiropractic, wrongfully use the Allopathic sign boards, "cure" and "heal." It is difficult to break away from the use of words which we have used all our lives, altho we may know that we use them incorrectly.

We no more cure or heal our patients than the sun rises and sets. These are terms used to convey certain ideas.

Every well informed person knows that our earth revolves upon its axis once in twenty-four hours, which causes the apparent rising and setting of the sun.

A few Chiropractors wrongfully use the words *cure* and *heal*, knowing full well that we do neither. We adjust the human frame, the skeleton bones, to their normal position, thereby releasing pressure on nerves; then Innate Intelligence is able to again perform its varied functions in normal force and quantity, which is health.

ACUTE AND CHRONIC DISEASES.

John P. Arnold, M. D., says, in the *New York Medical Journal*: "We have advanced in the bacteriology, pathology, hygiene, and the general study of medicine, but we are not much better equipped than our forefathers were in treating a large proportion of cases, especially those in chronic disease."

All chronic diseases are preceded by the acute stage. If there were no acute cases, there would be no chronic. In other words, if the cause of those conditions, listed as acute, were adjusted, there would be no displacements of the bony framework to produce and perpetuate the chronic conditions.

All acute diseases are characterized by excessive heat, commonly known as fever. This heat softens bones, changes the shape of vertebræ and the intervertebral foramina. These modifications not only alter the shape and size of the foramina, but cause pressure upon the brain nerves as they proceed from the spinal cord. Innate Intelligence may in time so modify the opening thru which the nerves pass, that they cease to be impinged. How much better that we should know where and how the pressure is produced, and then remove it by replacing the vertebra in its former normal position.

A knowledge of bacteriology, pathology, hygiene and medicine does not assist us in locating displaced joints which impinge nerves, thereby increasing or decreasing their functions; either condition being that of disease. Therefore, we fully agree with Dr. Arnold in the above paragraph.

CANCERS.

Chiropractic has taught us brevity; therefore, if you desire to learn the definition, symptoms and physical signs, pathology, the usual diagnosis, morbid anatomy, the M. D.'s treatment and prognosis, please read medical books or ask your physician, for I wish to dwell only upon the etiology and the proper adjustment to allow the rebuilding of abnormal malignant growths called cancer. These last named items you cannot learn from medical men or their books.

That I may be better understood, I will preface my statement by saying that no two of us look or act alike in shape and size of our bones; no vertebra in one spinal column will fit any other; no two of us have arteries and veins just alike; no two persons have nerves that sense alike; none of us see, feel, smell or have the same taste. If it is a fact that we are unlike in health, then how much more so when we are ailing, when the function of nerves is deranged by impingement? No two persons are alike physically or mentally, therefore, the manifestations of disease, whether local or general, are never the same

in two or more individuals, altho the location of the physical representative may be the same, yet the combination of functions involved would vary, in degree and quality, in each case.

Cancers are the products of the lack of or stimulated transmission and expression of corresponding currents of mental impulses. We no longer wonder that there are so many kinds when we consider that no two of us sense alike. All cancers, no matter in what part of the body, have one and the same cause; they are produced by hindered mental impulse, but the effect of these impeded impulses show their dissimilarity in the great diversity of cancers.

All actions of the body whether normal or abnormal, pleasant or unpleasant, whether in health or disease, are but the products of coördination or incoördination. The educated mental impulses perform the acquired movements. The Innate mental impulses control all of the functions of the body, whether these actions are natural or otherwise. Displaced symptoms are but decreased or increased normal functions. The normal medium, is health; any deviation either way from that is disease. All ailments are but the result of either depressed or exaggerated qualities of mental impulses produced by irritation or paralysis of functions. This excited or depressed conditions has, as *its* producer, pressure on nerves at their exit from spinal column.

In health, one set of the efferent nerves convey a normal supply of calorific mental impulses, maintaining thereby a normal temperature of 98 degrees. If the nerves be slightly impinged the supply of impulses will be increased—excessive—the M. D.'s fever is the product.

When all nerves are free from impingement, then all actions are performed normally and the result is health. A mental impulse hindered produces too much action or not enough. In cancers there are exaggerated functions.

A cancer is but the result, the expression of an abnormal mental impulse; therefore, to restore cancerous tissue to normal we must adjust the physical representative of the cause; the nerve being impinged by an occlusion of the foramen in the spinal column must be released.

The location of cancer shows to a Chiropractor what nerves are affected by being impinged in the spinal column. He is able to locate where they are pinched, producing their derangements with corresponding results.

There are fifty-two articulations in the vertebral column. Each of these are liable to be wrenched from their normal position, making an M. D.'s sprain a Chiropractic subluxation.

Cancers are not alone the result of nerves being impinged in the foramina, but also the vital issue—*the* cause—is the interference with current, without which life could not have existed. The injury that made the subluxation, which pinched nerves of

several functions, causing the condition named cancer, is always found to have been of many years' standing.

The location of a cancer determines to a Chiropractor the intervertebral foramen in which the nerves are pinched. The sensitive nerve can be traced by digital examination to and from the cancer and the occluded foramen.

Bear in mind that all subluxations of the vertebræ change the size and shape of the foramen, but do not necessarily produce occlusion. But whenever the superior processes are thrown forward, causing more or less lordosis, separating the articular surfaces, such derangements cannot help but alter the size and shape of the foramen and impinge the nerve or nerves that pass thru the opening, thus diminishing, either in part or wholly, the caliber; hence, carrying capacity of those nerves. Current is what is broken, either by intensification or extreme loss of.

The surgical method of cancer increases the pain and distress of the afflicted and does not adjust the cause, while the Chiropractic adjustment usually restores the current by degrees and action is correspondingly restored also; hence healthy, normal tissues supply those that are decayed.

The practical side of Chiropractic is, that the cancer fades into oblivion in proportion as restoration of new cells takes place, by reversing process of retention and excretion, and the life of the patient is manifested in a coordinated manner. No useless medicine is given to depress the system, no knives or anesthetic used to endanger life. The cancer disappears by absorption, pus, or sloughing. If small and not open it is absorbed; if large and not open, it decays, forming pus of a green color; if large and open, it becomes dead and separates from the living tissue.

Adjust the subluxation, release the impinged nerves, restore the normal circuit, re-establish the cycle, minus interruptions; the result is normal, healthy tissue; that is Chiropractic.

CATARRH.

Catarrh is the name given to a combination of symptoms, of which excessive heat predominates, followed by drying and decomposition of the product of the mucous membrane—serum—of any internal cavity or hollow organ. It usually means, if not otherwise defined, catarrh of (P. 245) head, nose, hypertrophic rhinitis, and eustachian tube.

The mucous membrane is of serous origin, and is one of the transitional tissues of that character. We find serous circulation exceedingly complete in these tissues. Mucus being the transformation from serum thru the mucous membrane. This is the inside skin, begins at the entrance to the buccal cavity, extends throughout all internal organs, ending at the anus. Ear,

nose, mouth, eustachian tube, throat, stomach, bowels, bladder, vagina, uterus, urethra, lungs, etc., are lined with mucous membrane.

It derives its name, mucus, because of transforming the serum, which is of milky consistency, to that of a slimy fluid after osmosing thru mucous membrane. This mucous fluid keeps the organs in constant lubrication, and assists digestion as well as by placing a coating around foods to assist in their outward passage.

Catarrh represents a decomposition of this serous product, due to an excessive heat. This is frequently referred to as a mucous heat or catarrhal fever. The excessive heat proves the existence of stimulated calorific mental impulses, ending in the membrane affected. Calorific chemicals are deposited in normal quantities, but excessive mental impulses cause more than normal combustion. Slight pressure upon these (calorific) efferent nerves as they leave the spinal column is the physical representative of the cause of the stimulated condition.

Excessive heat, in mucous membrane, dries the mucous fluid, the consistency of which in normal state, is like thin mucilage. As it dries by excessive heat it thickens, the froth is followed by spots of thick, white, then gummy and ropy matter, which in turn is streaked with yellow, then covered with green, which is the last stage of decomposition.

In catarrh of stomach, gastric catarrh, the medical profession would maintain that a lack of gastric juice was prevailing.

The quantity is normal, but excessive heat dries what is deposited, so much so, that its action cannot be normal. The larger portion of the gastric juice of the stomach is manufactured by the spleen. In this instance the quantity of gastric juice is not molested. The surface of the stomach is covered with multitudinous nerve fibrils, each fellow having its function to perform. In catarrh of stomach this inside skin, mucous membrane, is reddened and swollen.

Thus we might proceed indefinitely with each form of catarrh that is brought to our daily practice. Each form receiving its name according to the organ, quantity involved and location of the affection.

The cause of disease is the inability of Innate to express her wonted mental functional abilities thru a certain organ by means of impulses that are carried by nerves and then placed into action to perform the functions of impulses. If hindrance occurs, disease is the result. The character of the disease depending entirely upon what functions are being hindered and to what extent.

In catarrh the abnormal function is heat. Restore this to normal by proper adjustment of the sublaxations, that are always present, and healthy tissue is the result. It cannot be otherwise. Catarrh in any form or location cannot exist under normal con-

ditions. During adjustment you will notice that effects disappear in a reversal manner to what they came. The hard, solid, lumpy form of the discharge will begin to liquify, the nose or organ involved will flow the same quantity of substance as previously, only it is changed to its liquid state. Following the removal of all green matter, mucus will appear streaked with yellow, then thick, gummy and ropy, each taking its return period to the normal. You have now reversed effects by reversing its cause.

Catarrh is universal in all states, and is one of the easiest and quickest effects to show Chiropractic results.

SYNOVIAL MEMBRANES.

The mucous membrane lines all the surfaces of the canals, tubes or hollow organs that have external openings. The serous membranes cover the surfaces of those organs that have external openings and those organs which do not open externally. This membrane being one of the divisions of the complete serous circulatory system, it is one of its transitional tissues.

The synovial membranes line the joints, not between the joints where the thin cartilages are, but around the joints.

This synovial membrane secretes a fluid named synovia. It is used to lubricate the thin cartilage, the ligaments, muscles and all parts of joints.

We have pointed out to you the results of excessive heat on the mucous and serous membranes; what effect has excessive heat, inflammation, on the synovial membranes, similar to the other membranes, viz., that of producing an over supply, or that of drying the synovial fluid and depositing it on the articular surfaces of the joints. This deposit, we are told by the chemists, is urate of soda. It is deposited in crystalline form, as you may see by these specimens, above and on the articular surface of the joints. The names of disease under which these deposits are formed is usually called articular rheumatism, or arthritis, as you students will remember in studying the vertebral column. We will find the same conditions of long bones as we have on the articular surfaces of short bones.

Medical men suppose that these deposits produce the inflammation of the joints. As I have told you before, reverse what the medical men say of the cause of disease, etiology, and you will come nearer to the truth.

The inflammation induces the synovial fluid to dry and deposit on these surfaces.

These crystalline deposits on the articular surfaces prevent the free, smooth, easy movements of the joints, and produce that creaking feeling and sound felt and heard upon moving

the joints of the rheumatic, the unfortunate person afflicted with the gout, arthritis deformans, of which we will learn more in our lesson.

The normal effects, decreased or increased is disease. We have just noticed the effects in one extreme, now we will notice the effects where there is an excess of this synovial fluid. Remember what we have said of all diseased conditions, that they are but extremes of the normal either way, either too much or not enough. When we find excessive secretion of the synovial fluid, we have dropsy of the joint, dropsy of the head (hydrocephalus); of the heart (cardiac dropsy, hydropericardium); of the abdomen (ascites); dropsy of the testicle (hydrocele); of the lung (plura, hydrothorax); general dropsy (anasarca); and so on.

This condition, called by the medical men dropsy, water dropped, is the result of an over action, too much life, it is over secreted, causing an over supply, a surplus of fluid elaborated or held. In this we often use the common accepted name of dropsy. As we understand it in a Chiropractic sense, it is a fluid that is over secreted and retained.

The contents of cysts, excess of fluids collected, are either liquid, serous, yellowish-white, like milk, reddish, albuminous, adipose, or caseous; these are more or less thickened fluids from some of the membranes, whose integuments are unduly active, following a light pressure, the twig ends of which end there. The abnormal results from abnormal actions are never just alike, because in the first place, the same functions in no two persons are alike, and they are never under different conditions just alike in the same person. Diseased conditions increase a greater variation of the action and the result of those actions.

Those abnormal conditions, diseased affections, are produced by unnatural action of impulses; reverse this action from abnormal to that of normal, allow the nerves to act normally, then these abnormal effects will be in harmony right. For example, the fluids secreted by the liver, called bile, is thickened and dried by hepatitis, excessive heat, until the fluid is made into solid pieces called biliary calculi, or gall stones; these may be found in the substances of the liver or in the gall ducts, where they have passed down from the gall bladder thru the cystic duct, but are usually found *in* the gall bladder.

These concretions, fluid dried and retained in solid form, are liable to be found in any part of the body, usually in such organs acting as reservoirs, or the canals passing from them. We have calculi of joints, articular deposits of chalk in gout, called gout stones. Calculi of the kidneys or of the bladder, called gravel. Calculi of the lungs, of the breast, of the pancreas, etc. Medical men, in their books, state that these calculi, hardened secretions, are not soluble, cannot be disintegrated; they only know of spontaneous expulsion or extraction by some one

of the operative methods. Chiropractors are the first to discover that any of these calculi, no matter in what part of the body they are, may be dissolved by Innate Intelligence, but we, the Intellectual Intelligence, must make conditions favorable for Innate to return the abnormal results back to normal.

Now, then, let us repeat, in order that we may make the subject not only more clear, but that we may be able to proceed farther. We desire to make our explanation so that they will explain, because there is so much of medical explanation that does not explain; where is there medical education that does?

The nerves that reach to and end in the liver or gall bladder are pressed upon as they emerge from the spinal canal, producing inflammation in those organs. The effects, the result of the functions of nerves, whether normal or abnormal, are at the twig ends of those nerves.

This excessive heat—remember that all heat produced in the body, whether in excess or a lack of it—is, by and thru mental impulses, not blood, as we have been taught by all schools, including the advanced Osteopathy—this excessive heat dries bile, solidifying it into hardened chunks. By freeing those nerves, we liberate those mental impulses that were interrupted by the foramina that was partially occluded, and allow them to perform their natural functions; the result is that the calculi are returned, dissolved, disintegrated to their former liquid condition and passed thru the natural channels.

DIPHTHERIA.

Mrs. J. H. M—— was visiting at her mother's home in Rock Island. She had set a day to return west. But as her daughter, Morine, age nine, was taken with diphtheria in an aggravated form, the home trip had to be deferred. I was called on September 23d, twenty-four hours later. The neighbor's house had a "diphtheria" card on it, and the usual quarantine regulations ruled.

Morine has been subject to spells of croup. A Chiropractor recognizes that croup and diphtheria are symptoms that have their cause in the same subluxated vertebra. These two ailments differ in degree, as do other diseases, so that it is difficult to draw the line of distinction. The functions expressed by mental impulses are never exactly alike; they differ as do sensations of different persons in health and disease.

A few questions and an analysis showed diphtheria symptoms fully developed. I told the family, who are acquainted with Chiropractic adjustments, where we would find the subluxated vertebra.

I found in this case, as I have always, a displaced dorsal vertebra, and a sensitive nerve emanating from the partly oc-

cluded foramen, which covered the membrane of the throat with its branches. The quantity of mental impulses was excessive, therefore the expression of too much heat at the twig ends of nerves, because of being pinched in the foramina.

Poisons taken changes the character of impressions into the system in food and water that is polluted, or by breathing noxious effluvia from decaying vegetable or animal matter, or by the outrageous practice of the M. D., who injects vaccine poison into a healthy person, which induces a violent responsive action on muscles sufficiently to displace vertebræ and impinge nerves, causing derangements which we name disease.

We placed the patient on the table and adjusted the displaced vertebra. She arose and said, "Mamma, I feel better already." In five minutes the excessive heat had subsided. The next day I found her very much better. At the third call, she having the benefit of two adjustments, I found her up and wanting something to eat. Seven days later she was in our office and no physician would have thought from her appearance that she had had diphtheria.

Vaccine virus, or other poisons which create diseased conditions, will not permanently affect the patient when a Chiropractor keeps the vertebra in proper position. We have checked the fun of doctors and saved children from being poisoned by adjusting the vertebra that the pus poisoning was displacing.

The Allopath and Osteopath agree in that diphtheria is highly contagious, readily communicable from one person to another, that Klebs-Loeffler bacillus is the cause.

This theory is founded on fermenting spores being transmitted from one person to another, as in yeast. In treatment they differ, the Osteopath aiming to do with his hands what the medical man tries to do with his drugs. The Osteopath gives a general treatment, which takes five pages to describe, and over an hour of hard work to perform the 200 movements explained. This treatment is to be repeated every six to eight hours.

The Chiropractor replaces a vertebra by one move, which takes but a moment. Wherein does the Chiropractor resemble the Osteopath or Allopath?

EPILEPSY.

If physicians knew that the warmth of the body was produced by combustion of chemicals, which is the offal of nutritive substances, produced by calorific mental impulse conveyed through efferent nerves; that the excess was produced by excessive combustion, which is induced by too much current; that epileptic attacks were always preceded by an outburst of calorificity in the upper dorsal; that when the attack ceased the

body resumed its normal temperature; that these paroxysms were produced by an occluded foramen which impinges nerves; that the primary cause was made so by a wrench; that the replacing of the subluxated vertebra would free the pinched nerves so that they could perform their normal functions uninterrupted; if physicians knew that the above propositions were demonstrated facts, and were able to replace the displaced vertebra to its normal position, they would certainly adjust the cause instead of giving medical treatment for the effects.

FELON.

"What causes a felon, and what treatment would you recommend for a felon?"

A felon is caused by nerve impingement between dorsal vertebræ. Chiropractors relieve all pain in a moment, by taking the pressure from the pinched nerves.

GALLSTONES.

Mrs. Black had gallstones. She was taken to the hospital and submitted to an operation, which was "a wonderful success"; but the doctor's certificate stated, "Death resulted from *Loliaceum* after operation." For the benefit of our readers I will give the full term as given by Dunglison. "*Loliaceum radicerapente*," means dog-grass, couch-grass, or twitch-grass, which is used by physicians in genitourinary irritation and inflammation, because of its aperient and drastic qualities.

An intelligent Chiropractor, understanding the principles of Chiropractic, would know that gallstones are consolidated bile; that there was an excessive heat in the region of the liver and gall-bladder to produce this condition; that all bodily heat, whether in excess or otherwise, mental impulses, and not of the blood, as we have been taught by the old schools; that the nerves which proceed from the spinal foramen have been encroached upon and impingement, which causes interference with nerve function, and inflammation in the area mentioned.

We have shown you that a medical man treats the effects, he does not know the cause; therefore, an operation is performed, which gives the undertaker a job, and throws the blame on "*Loliaceum*."

We, as Chiropractors, would relieve the pressure by reducing the spinal subluxation, thereby allowing the nerves to perform their normal functions, which softens the hardened bile, returning it to liquid condition.

GOITRES.

Chiropractors do not "treat" goitres. They adjust the cause, replace the vertebra, release the pressure on a nerve, which restores co-ordination, hence no enlargement named goitre can exist.

The practitioner and layman are not to blame for using the words "treat" and "treatment," for they have known nothing else but the various methods of treating. Chiropractors do not treat the goitre. They find the cause and take off pressure from the nerve, whose functions are exaggerated.

INSANITY.

"Dr. T. S. disappeared two weeks ago last night very mysteriously, leaving word that he was called away suddenly, and every effort to locate him since has utterly failed. He took with him over \$1,100 in cash, which he drew from the American Exchange Bank that day. No reason is known for his leaving, and his family is at a loss to account for his absence.

"The last seen of the missing man was on Thursday evening, May 15th, when his son, Thomas J. S., called at his office. His father was apparently in the best of health and spirits, and said nothing whatever about going away, although later developments show that he had been planning that day to go somewhere.

"Friday was 'Ladies day,' when women patients called at the office for treatment. The doctor's wife had been in the habit of assisting him on these occasions and went to the office expecting to find him there, thinking that she would learn why her husband had not been home the night before. His absence did not alarm her, as his practice had at times kept him from home.

"On the table in his office she found an envelope addressed to her in the doctor's hand-writing and containing a brief note scribbled on a scrap of paper, which read:

" 'Dear Sarah :—I have been called away suddenly. Get along as best you can until I return. THOMAS.

"Besides the envelope was a bunch of keys usually carried by her husband. She still expected that he had been called to some case in the remote part of the city, and that he would come in during the morning, but when he failed to appear she finally became alarmed and sent for her son.

"They then decided that the affair be kept quiet and what inquiries were made were among intimate friends who were asked to say nothing about it. It was not until May 25th. that any news was received, and then a letter came from Seattle, Wash., signed 'W. H. Watson.' It was written with lead pencil on a note-head of Hotel Ranier Grand, of that city, dated May 19th.

"The writer said that Dr. S. was in good hands, under the care of 'Brother Masons.' He had been found on the train Friday (the day after he was supposed to have left D——) acting strangely. He had a through ticket to Seattle. He was unable to give an account of himself, but his identity was learned from the papers carried. He had been placed in a good hospital, and the attending doctors said he had a case of brain fever. He talked continually of Dr. Murray and Ida and Ida's baby, and seemed to believe he was taking the baby where they could not get it. He called for Ida very often, and at times said that the office must be closed up and the heads and cases be placed in the high school. Watson said S—— was doing well, and would probably be better in a day or two, and promised to write again in that time.

"Manager Dunbar, of the Hotel Ranier Grand, was wired to at once, and replied that he knew nothing of Dr. S—— and that he had not been there, nor could he be located at any of the hospitals or at other hotels. He added that W. H. Watson left on May 20th.

"The D—— police were then applied to, and in response to a telegram from Chief Troyer, Chief Sullivan, of Seattle, wired that he could not locate either S—— or Watson in that city.

"It was learned that he asked a friend for the loan of a grip, saying that he expected to be called away soon and needed it. His friend brought his suit case to the doctor's office on the day he disappeared, and the doctor evidently took it with him.

"As before stated, no reason is known for the disappearance of the doctor. He had a beautiful home on East Sixth street, and a very large practice. He had never shown any indication of mental disorder, although he had been working very hard for five or six years, as his practice grew.

"The letter signed 'Watson' had every indication of having been written by someone acquainted with Dr. S——, or at least with some of the missing man's affairs. The 'Ida' referred to was Dr. S——'s daughter, who resides in the east end. A baby was born to Mr. and Mrs. Arbouin about two months ago, which lived but a week.

"The missing man is about fifty-eight years of age, has lived in D—— and practiced the healing art for several years, and has a family, the youngest of whom is fifteen years of age. He is a Thirty-second degree Mason and a Mystic Shriner.

" 'I do not know what to think,' said T. J. S—— last night. 'The more I learn of the case, the more mystified I am. We have done everything that we can think of to locate my father, but without learning anything. The family relations were always pleasant; father had been fixing up his home, his business was prosperous, and his health was apparently ex-

cellent. He took great pride in his garden, and it is one of the finest in the city. No, I cannot even form a theory, and we are simply waiting in hopes that something will turn up."

The above was copied from the Duluth, Minn., *Herald*, of Friday morning, May 30, 1902.

The most interesting and instructive part of this strange story is yet to be told by the writer.

Dr. S—— is a graduate of *The P. S. C.* Among other efforts to locate the missing man, they wrote to me, thinking it possible that he had taken a notion to come here. About June 7th I received a short letter from Dr. S——, written at San Francisco, stating that he was going to Los Angeles, and that he wanted some Chiropractic literature. This letter was immediately forwarded to his family. From that time any knowledge of Dr. —— was promptly passed between the family and me.

Whenever Dr. S—— was heard from he was always going to some other place. About June 14th I made up my mind to go to the coast and locate him. He seemed to have a traveling mania, was liable to be heard from at any place between Spokane, Wash., and San Diego, California.

June 28th I arrived in Pasadena. On June 30th I made a trip to Ocean Side. Dr. S—— was on that train going to San Diego, but was not seen by me.

The house where Dr. —— had been rooming was located. The landlady thought he acted strange at times; she took him to be a sporting man, and did not see much of him, as he only roomed there, taking his meals elsewhere. She had read the above item, which had been copied in the *Los Angeles Times*. She did not have the least idea that she had the much sought for man in her house.

I kept in touch with the S—— family in D——. They heard from him occasionally, but he was always on the go, just going to some other place, so that by the time I got notice from D——, it would be about ten days, which gave him time to make another move.

About July 15th I was at Los Angeles; I had just entered a street car for Pasadena. Dr. S——, accompanied by a boy about the age of fifteen, entered the car and was immediately recognized, although he did not look like the former Dr. S——. His face was bloated, an eye blackened from a bruise; his clothing was soiled and unkempt; he was a very different looking man than the Dr. S—— of a year ago. We took him in charge. Arriving in Pasadena, I wired his wife, "I got him; a little off." His family had written me to "Head him off if possible."

He was in a pitiable condition; he knew that he was not mentally right; for that reason he had the boy care for him.

We showed him the picture of the class in which he graduated. He did not recognize his own likeness or that of any member of the class. He would say: "I ought to know them, but I don't."

Frequently for hours at a time he did not know anything, and only knew of that which transpired during those unconscious spells from what others told him. On one occasion he sat on a rock on Santa Barbara beach, when the tide was out. He remained there until the incoming tide was up to his waist; some bathers observed his condition and took him ashore. He says that on all such occasions, when he came to himself, there were Masons caring for him.

After satisfying ourselves that Dr. S—— was mentally deranged, and knowing that the cause of his condition was a displacement (subluxation) of a cervical, I spoke of it and he replied, "I know that is the cause, and I have been trying to find someone to fix it." I took him in my adjusting room, laid him on a table, and by one Chiropractic move, adjusted the displaced cervical that had been pressing on the nerves that went to the right side of his head and he said: "This side of my head has been gone for a long time, it is here now, I can think." He arose with his former intellect.

After dinner I asked him how much money he had. He replied that he did not know. I asked him where he kept it. He said: "I used to keep it in my inside vest pocket." Upon looking, he found \$460. He then inquired how much he had when he left home. I told him that he drew out of the bank \$1,100. As fast as we thought best we informed him how matters were at home.

We tried to keep him and the boy over night, but we had been imprudent in showing the boy a case of bones; therefore, we could not persuade him to stay. They returned the next day according to promise. It was surprising to see how differently the boy viewed the bones. The evening before he was afraid that the doctor might want his bones, now he took much interest in handling them and asked questions; the fear of the day before had all disappeared.

Dr. S——'s case was certainly a peculiar one. He told me that when he was on the boat going to Catalina Island, which is thirty miles from the mainland, that "the other fellow" wanted him to go to the side of the boat, jump in and end all; that he had all he could do to keep himself near the center of the boat.

About two weeks after the first adjustment, he came in and said that he had quite a time to get to my place; that "the other fellow" talked climate in San Diego, and he talked adjustment in Pasadena. "But I got here." To anyone but a graduate of *The P. S. C.* this language would seem strange.

A man met Dr. S—— in Los Angeles and called him by name. The doctor told him that he had the advantage, that

he did not remember of ever meeting him. The stranger said he ought to know him, that he had been his nurse in a hospital three weeks, that he had given him lots of medicine. The doctor replied if he had taken any medicine, he had not been conscious of it; that there was a long period of time that was a blank to him.

Dr. S.—— had no remembrance of anything that transpired since seeing his son Tom in his D—— office. The first that he realized was that he was walking on the street of a strange city. He inquired what place it was and was told it was "Frisco." He realized that he was not right mentally. He remembered that he was a lover of flowers, and thinking that the sight of them might place him in his right element, he inquired where he might find them. He had not yet discovered that he was in "the land of flowers." From that time he was partially conscious at times, realizing his condition, and at other times he was entirely unconscious, especially when "the other fellow" wanted to change to some other location, making an expense for the doctor; when he was himself, he was averse to spending his money.

One very warm day he was in Pasadena. "The other fellow" was running him all over town, which was not to his liking.

Dr. S.—— was handled for two months by two different intelligences; the Educated never being fully conscious. When the Innate had full control, the Educated was not active. The moving of the doctor from place to place, buying the tickets, doing the business that is usually done by the Educated, was done by the Innate.

After having the displaced cervical replaced, he longed for his family, but when he thought of returning home, there came a dreadful fear over him, so much so, that he did not dare think of going to Duluth to settle up his business.

He had a great fear of becoming insane again. He felt for a time the need of keeping within calling distance of a Chiropractor. At times he would say, "Insane persons always think that they are all right, if I am not, I want you to tell me so. I think that I am, but I know that I am not the one to be a competent judge."

NOTE.—For obvious reasons we have omitted names and addresses.

MESSAGE ON THE BACK.

Under the above heading, the August issue of *The Medical Standard* says: "Modern medicine calls attention to the effectiveness of rubbing and manipulating the back as a means of relieving a multitude of distressing symptoms from which the neurasthenic patient suffers."

Neurasthenia means "Nervous exhaustion," a run-down condition, an impaired activity of the nervous system. A word that comes handy, and is often used by an M. D. or D. O. when the cause of general weakness is not known. The *Standard* says that there is "a multitude of distressing symptoms" of this class. Knowing that medicines do not reach this host of ailments, the editor asserts that rubbing and manipulating of the back gives relief. There are a number of diseases for which medicine is of no value; but a general massage of the back is a relief.

After describing various movements and manipulations for the back, he reminds his medical brethren, "If greater attention were given to these simple therapeutic measures by physicians, there would be less room for the exploits of Osteopaths and other imperfectly qualified persons."

If rubbing and manipulating is so "simple" and achieves such renowned, heroic deeds, as done by "imperfectly qualified persons," why not make it an important part of your curriculum, teach it in your colleges, and include it in your state examination? Why not be Osteopaths?

TAPEWORMS.

Chiropractors do not expel them; they do nothing as an M. D. does.

Tapeworms are parasitical scavengers. They subsist upon decayed food. Those who are afflicted with such parasites have indigestion. A Chiropractor takes the pressure from the stomach nerves. When the digestive tract is in normal condition, there will be no suitable food for scavengers; they will be digested as other food.

SEROUS MEMBRANES.

Mucous membranes line the inside surface of all hollow organs, canals or tubes that have an external opening.

Serous membranes cover certain organs and those cavities, internally and externally, that do not open externally.

The mucous membrane lines the lids of the eyes, nasal passages, the auditory canal of the ear, the Eustachian tubes, the lips, all parts of the mouth, the throat, trachea (windpipe) and bronchial tubes, gall bladder, tubes of the pancreas and liver, the ceacum and the appendix, the stomach and bowels to and including the anus, bladder, uterus, vagina, ureter and urethra.

The serous membranes cover the brain, heart, chest, the abdomen, the pleura, or outside coverings of the lungs, the peritonium that encloses the viscera of the abdomen.

The mucous membrane secretes a mucous slimy fluid; the serous membrane has a thin watery fluid.

Some of the diseases of mucous membrane are granulated eyelids, rhinitis of the nose, catarrh of the ear, catarrh of the lungs, which is an affection of the tubes of the lungs, generally known as tubercular consumption; catarrh of the stomach, known as gastritis; appendicitis, inflammation of the appendix; diphtheria and croup is an inflammation of the mucous membrane of the throat; and so on with the diseases of the bladder, the vagina and uterus.

In diseases of the serous membrane, we have inflammation of the brain causing sclerosis and mollitis, hardening and softening. These diseased conditions in the soft tissues are the same that we have been studying in the diseased bones. Of the heart, we have pericarditis, inflammation of the pericardium, the outside membrane or covering; this smooth membrane when lubricated prevents friction during its movements. If this membrane becomes inflamed we have an inflammation of the heart named pericarditis; the result is a tendency to produce and retain too much serum; this unusual amount of held-up serum is named dropsy-hydropericardium. The membrane that lines the heart on the inside is liable to be inflamed, this condition is called endocarditis.

All of the diseases of the mucous membrane and the serous membrane that we have noticed, and many more, have their primary cause in nerves that are conveying too much calorific mental impulse, producing too much heat in the membrane that is affected. What we have just said in regard to the cause is as far as an M. D. would desire to go. But Chiropractors ask what is the cause of this undue amount of heat? We find that if a nerve, or a bundle of nerves, are pinched that there is an abnormal effect, viz., too much action or not enough. In the diseases noticed there was too much heat, too much action and too much life. Disease is an extreme either way.

Cancers come under the head of diseases of the serous membrane.

MUMPS.

G. K. brought his son Willie, January 15, to be adjusted for mumps. On the 17th he brought his daughter Helen, who had the same disease. One adjustment each made these children well, while other affected children were absent from school during the run of the disease with its complications.

Which is better, to treat effects and let the disease have its usual run (for it is one of the self-limited diseases of the medical men), or adjust a displaced vertebra and have it fixed at once? Another question, as readily answered by the Chiropractor: Why does the physician prescribe remedies for this disease, its complications and sequelæ? The first question is already answered by the reader, viz.: Adjust the cause, of course,

if the physician knows where and how. The second is as readily answered. If the physician knew the cause, he would adjust it instead of prescribing for the effects.

But, says one, "The Osteopaths do not prescribe drugs." Dr. A. T. Still, in his book, *The Philosophy and Mechanical Principles of Osteopathy*, on pages 114 to 116, says: "That all contagious diseases, including mumps, are developed from latent seeds that are lying dormant in the fascia; that extremes of heat and cold vitalize them."

Dr. A. P. Davis, in *Osteopathy Illustrated*, gives his treatment for mumps. I will quote it so you may see the dissimilarity between Chiropractic adjustment and Osteopathic treatment. Page 288 says: "The proper method of treatment, then, is to manipulate close under the angle of the jaw and relieve all contracture in muscles in that region; then stretch the neck, as directed elsewhere (see page 191, it consists of two dozen movements), twisting it at the same time, and then manipulate all of the muscles of the neck, raise the clavicles, arms, chest; stimulate the vasomotor area. The glands are easily relieved of their contents, and will be rapidly disengaged by manipulating them as directed for a few moments; removing soreness gradually by the beginning of manipulations at the outer edge of the soreness. In this affection general treatment should be had every day, and the disease may be reduced to a minimum, and by avoiding exposure to cold no danger of metastasis. Should that occur, follow up the treatment. Gentle treatment daily, or twice a day, relieves and shortens the disease and mitigates the suffering greatly."

The Chiropractor adjusts one vertebra by one move, unknown to Osteopathy, which does not occupy a minute. Wherein is there any resemblance between Osteopathic treatment and the results, and that of Chiropractic adjustment and its immediate effects?

Does a Chiropractor practice either medicine or Osteopathy?

PARALYSIS.

HISTORY OF THE CASE.

We became acquainted with A. S. Dresher on December 2, 1897 (thirteen years ago). On that date he came to our infirmary on crutches. He was as cross as two sticks. We drew from him the following history of the case:

During the past eighteen months he had paid out \$1,000 in doctor bills. Nine doctors said that he was a helpless paralytic. As far as feeling and use was concerned, his leg was dead. Better far to have remained in that condition than to allow the doctors to amputate it as they desired. Pins could be thrust into it without causing sensation, there was no feeling in it whatever.

There were several running sores from his hip to the ankle. Above the knee it was three inches less in circumference than its mate. He was despondent, surly and cross. He said that he had lost all hope of anything curing him, and that he would rather go home dead than to remain in that condition.

Subluxation Caused Paralysis.

We found a lumbar vertebra slightly displaced by a wrench. This subluxation occluded the left foramen, pinching the afferent and efferent nerves as they emerged from the spinal canal. This pressure had the same effect on the nerves which convey impressions to and impulses from the brain, as a ligature around the arm would have on the fingers. We should use as good judgment in relieving the affection of the leg as we would in relieving the benumbed hand, by releasing the pressure on nerves made by the band around the arm.

The discharge from the open wounds was condensed decomposed serum, which had ceased to circulate because the paralyzed nerves were unable to perform their functions.

When thru with my examination and explanation, he said, "I know there is something wrong there, for it feels like a pebble would if under the foot."

Feeling Returns.

He took adjustments for five weeks. During that time we continued to replace the displaced vertebra, which had become irregular in shape. It had to be returned, grown to its normal figure, before it would remain in its former natural position. His rapturous delight was unbounded when he found feeling and use returning to that worse than useless limb.

Returns Home Well.

At the end of five weeks he took his satchel in his right hand, his crutches on his shoulder, and thanking Chiropractic for his recovery, returned home a happy man, and today is able to state that he has no recurrence of his former trouble.

PNEUMONIA.

R. E. Hamilton, D. O., in *The Journal of Osteopathy*, under the head of "Pneumonia," tells us "How the Osteopath handles the case." Do Chiropractors manage inflammation of the lungs in the same manner as Osteopaths? Are Chiropractors faking Osteopathy when they adjust displaced vertebræ, remove pressure from nerves, restore normal temperature, pulse and respiration in five minutes?

Dr. Hamilton says: "The nursing and general care of the patient is very little different from that of any other school of

practice, but the treatment is based on the *apparent* cause of the attack. Weakness of the lung may be due to a lesion of the ribs, the dorsal or cervical vertebræ. Treatment must always be directed to the removal of lesion found. Vigorous treatment should be given only in the first stage of the disease, the earlier the better. The trouble may be sometimes traced to the heart weakness and the centers affecting the heart must be looked after.

"The centers for the kidneys and the intestinal tract should be examined, as lesions affecting these organs are quite frequently found in pneumonia. Any measures, such as swathing the patient's thorax with cotton, which will cause the blood-vessels near the surface of the body to dilate, will help to relieve the congestion."

He tells us that "the apparent cause" of the attack, as the disease was an enemy, had seized the patient, and assistance was needed to repel the intruder, may be found in lesions of the ribs, dorsal or cervical vertebræ, kidneys, intestinal tract, or heart. Chiropractic is specific; it locates the cause at one dorsal vertebra.

Chiropractors look upon pneumonia as a misfortune, as the result of an accident, instead of an enemy, that should be fought.

In Osteopathy the "attack" is successful, because the lung or heart is weak and not able to repel the invader. In Chiropractic, it is owing to an impingement of calorific nerves which supply the lungs with heat, creating an excessive amount.

The Osteopaths "treat" such cases. The Chiropractors *adjust* causes.

Osteopathy says, nutrition of the lungs, or the dilation and contraction of their blood-vessels are affected. Chiropractors find that calorification has greatly increased.

Osteopaths give vigorous treatment in the early stages of the disease. The Chiropractors give one energetic adjustment, which is done by one move, not taking to exceed one-half minute.

The Osteopaths are advised to look after and examine the nerve centers in the brain, spinal cord and ganglia, where the nerves of the organs originate. Chiropractors are taught to locate the impingement, in the spinal foramina.

Dr. Hamilton advises any measures which will cause blood-vessels to dilate, because "A free and natural flow of blood is health." Chiropractors do not believe that blood impeded by contracted veins or arteries is the cause of disease.

D. O.'s talk about lungs being congested. Chiropractors seek to know why they are inflamed. The pathological changes in tissue, altered nutrition of blood-vessels, circulation and exudation of fluid is due to excessive heat.

Wherein is there any resemblance between Osteopathy and Chiropractic in etiology and method of handling a case of pneumonia?

We turn to page 111 of *The Principles of Osteopathy*, by E. H. Laughlin, D. O., and read: "Relax the muscles along the spine, remove the lesion, treat the kidneys and bowels, relax all the cervical tissues, raise the clavicle and depress the first rib, treat along the vagus and recurrent laryngeal nerves near the sternomastoid muscle. For the fever treat the sub-occipital muscle, also inhibit the abdomen, stimulate the vaso-motor centers to the lungs, raise the lower ribs and stimulate the accelerators of the heart. To ease the rough treat the larynx and trachæ."

A. P. Davis, M. D., D. O., an Osteopathic student under the personal instruction of Dr. A. T. Still, says of pneumonia, on page 434 in *Osteopathy Illustrated*: "Capillary congestion, due to pressure, either on the venous system that carries blood out of the lungs, or on the nervous system that controls the peristalsis of the muscular walls of the blood-vessels, causes a difficulty."

"The most forcible indication points to taking off the pressure. This is done by following the general direction for freedom of the circulation."

"We, therefore, begin on the vaso-motor area, give thorough general treatment, using the limbs as levers to lift the weights."

Drs. Laughlin and Davis agree with Dr. Hamilton in the cause of, and method of relieving pneumonia. Their Osteopathic principles do not differ, yet there is nothing in them that is Chiropractic. Where in pathology, or method of controlling pneumonia, has *The P. S. C.* copied Osteopathy?

The only expression used, that looks like Chiropractic, is that of "Taking off the pressure," by Dr. Davis, who tells us, in comprehensive language, to "give thorough general treatment, to take off the pressure." He says, "This is done by following the general directions for freedom of circulation."

Dr. Hamilton says, "A free and natural flow of the blood is health, is an Osteopathic truism." To an Osteopath it is an undoubted, self-evident truth; a statement which is plainly true; a proposition needing no proof or argument.

It is falsity to accuse Chiropractors of faking Osteopathy. There is a greater difference between Osteopathy and Chiropractic than there is in any two of the four state-protected schools of Iowa.

POLYPI.

Polypi are small tumors which grow outward from and are a part of the mucous membrane. They are usually found in the uterus, pharynx and nasal passages; occasionally in the stomach, intestines, bronchial tubes, bladder and vagina. The

mucous membranes of any canal, cavity or hollow organ may be affected by them.

They vary in size, number, mode of adhesion and structure. They may be hard or soft, fibrous or cancerous. They present all the pathological conditions of tumors or larger growths.

The usual means of treatment are astringent powders or solutions, cauterization, excision and extirpation. These are but therapeutic remedies used to treat diseased conditions.

Pimples, boils, polypi, tumors or cancers are the result of too much heat produced by excessive calorific mental impulse. Abnormal growths are due to too much action of expansive mental impulse.

There is a new science that does not treat effects, but instead, adjusts the bones that are out of alignment. One case will serve for explanation:

Mrs. J. H. M. and her two children were visiting at her mother's home. Having adjusted her daughter, Morine, for diphtheria, by two adjustments, she desired me to adjust her son, Hugh, for polypi of the nasal passages, which were so filled that he made a terrible fuss when asleep.

Chiropractors find that polypi of the nasal cavities and pharynx are the result of impinged nerves between the cervical vertebræ.

Ten adjustments of a cervical vertebra freed the impinged nerves, thereby removing the cause of these tumors. There was no longer deranged functions producing abnormal effects. The polypi became free from the membrane and were discharged.

Proper adjustments have the same effect on larger tumors and cancers.

RACHITIS.

Rachitis, or rickets, is a disease characterized by crookedness of the spine and long bones, enlargement of joints, prominent abdomen, large head, leanness, general debility and indigestion. The most marked effect is the distortion of bones.

It is frequently accompanied by consumption, dropsy, diarrhœa, convulsions, congestion and enlargement of the internal organs, intestinal catarrh, bronchitis, flatulence, constipation, profuse perspiration about the head, hypertrophy of the tonsils, hectic fever, and atrophy.

Rickets is a disease of childhood, usually first noticed between the ages of six months and three years. If a child who is not ill, and who has not suffered from exhausting disease, does not walk at two years of age, it is probably rachitic. In most instances, the rachitic child begins to walk at some time during the

third year, and at this time the deformities of the lower extremities, such as knock-knee, bow-leg, flat-foot, usually develop and are observed. Some cases show at birth signs of what appears to be general rachitis. The trunk is proportionately long as compared to the stunted limbs, the head is large, the chest presents a pigeon-like distortion and the epiphyses appear to be generally enlarged. In some instances the back is curved into a rigid kyphosis or scoliosis, and restricted motion or apparent fixation of many of the joints may be present. Such cases are no doubt intra-uterine rachitis and have their cause in the foetus before birth, or have been injured by the obstetrician at birth.

Rickets is a defective calcification of bones when their growth is at its maximum, in consequence of which secondary changes occur. The softened bones seem to show a diminution, a resorption of earthy substances and an overgrowth of osteoid tissue. In the third and last stage of this disease the softened bones become abnormally hard, eburnated. Fresh bone formation contains a diminished quantity of lime. After the active process of decalcification has ceased, then lime is deposited in the osteoid tissue; the result is a thick and heavy bone, premature solidification at the epiphysical junctions and eburnation follows, causing a dwarfing of the stature. While the bones are soft, bodily weight and muscular action cause deformity of the bones by curving and twisting. The skeletal frame is not only deformed, but stunted. Such persons, as a rule, do not reach average size in adult life.

Boyer says that rickety bones are lighter than natural, and of red or brown color. They are penetrated by many enlarged blood-vessels, being porous and, as it were, spongy, soft and compressible. All of the affected bones, especially the long ones, acquire a remarkable suppleness, but if they are bent beyond a certain point they break. Instead of being filled with marrow, the medullary cavity of the long bones contains only reddish serum totally devoid of the fat or oily nature of the secretion in the natural stage.

Among the earliest signs of rachitis are enlargements of the wrists and ankles, called "double joints." Enlargements are easily felt at the junction of the ribs and costal cartilages, named "rachitic rosary."

The child affected with rickets stands with the legs apart, the thighs flexed, the knees bent, the back arched and the shoulders are thrown back. The skull may be irregular in shape, some parts of it may be too thick or too thin, too soft or too hard. These conditions of the cranium are named craniotabes. The fontanelle is abnormally large and may remain open long after the usual time. Teething is often delayed or is irregular. The infant makes but little effort to stand or walk at the usual period. Bronchitis is a common symptom of rickets. Convul-

sions may occur at any time of the disease, especially when there is any tendency to craniotabes.

Some writers think that rachitis is hereditary; that rickety children are born of rickety or scrofulous parents.

Whitman says that distortions of the softened bones are caused by atmospheric pressure, the force of gravity, habitual postures, muscular action or injuries.

Oppenheimer claims that malaria is the main cause of rickets.

Bradford and Lovett say that debility from any cause that impairs nutrition may be the cause of rickets; that syphilis is an indirect cause.

Whitman says rachitis is a constitutional disease of infancy, cause by a weakness that may be inherited or it may be the direct effect of illness, improper hygienic surroundings, such as lack of sunlight, damp rooms, overcrowding or poor ventilation. The direct cause of the disease is improper nourishment, due to artificial food during the nursing period, improper diet after weaning, or of prolonged lactation, or a defective quality of the mother's milk.

Bradford and Lovett says, under the head of rachitis prognosis, when the disease is left to itself it generally runs its course, and after a decided degree of bony deformity has occurred the process of bone softening is spontaneously arrested, and the bones harden in their deformed condition; that drug treatment is manifestly secondary in importance to careful regulation of the diet and hygiene. One finds a long list of drugs which are advocated by various writers.

Cooper says no medicine is known which possesses any direct efficacy in cases of rickets.

Whitman says medical treatment is of secondary importance. It is unlikely that any drug has a very direct influence on the disease.

Moore says a number of theories have been advanced as to the exact cause, but all are unproven. It is not hereditary.

Young says that there is no evidence that the disease is ever transmitted.

Tubby says that heredity plays no part in the production of rickets, nor does syphilis. Various theories have been advanced, and at present there is not one which will bear searching examination.

Cooper says the cause of rickets is involved in great obscurity.

This disease is divided by *Moore* into three stages: Incubation, deformity and recovery.

Tubby says that the bones in severe cases pass through three stages, that of congestion, of softening and of sclerosis.

Young recognizes three changes which lead to deformity, that of congestion or invasion, softening or deformity, hardening or sclerosis.

Osteitis deformans, osteomalacia, scurvy and cretinism are classed by orthopedists as forms of rachitis.

It is a chronic inflammatory affection of the bones. They enlarge, soften and from weight or compression by muscles they become unnaturally curved and misshapen.

Fragilitis ossium, osteomalacia, senile rickets, is a disease of adult life characterized by absorption of the earthly substances of the bones and deformity. The early symptoms are pain in the pelvis and thighs when in motion. It is usually supposed to be of rheumatic origin until the character of the affection is made evident by weakness and deformities of the limbs.

Bradford and Lovett say that nothing definite is known as to the cause of osteomalacia. *Whitman* says of this disease, "The etiology of the affection is unknown."

Scurvy and infantile scorbutus are also forms of rickets.

Congenital cretinism is a kind of rachitis. Intellectually and physically dwarfed. Born idiocy, physical degeneracy and deformity, usually accompanied with goitre.

Medical writers agree in that they do not know the primary cause of rickets. They know that malnutrition is at fault, but what causes the defective process of assimilation they are at a loss to know.

The P. S. C. is the first school to elucidate and bring to light the formerly unknown etiology of rickets.

In Chiropractic, as elsewhere, the identical cause with the same conditions produces similar results.

Rachitis is a name given to certain symptoms when associated together in the same person. These effects in different persons, although from the same cause, differ as to the nervous makeup of those who are effected. For be it known that no two persons look nor act alike; no two are alike in their formation of the bones, nerves or blood vessels. We differ more in our internal makeup than in our external.

Excessive heats, named fever by other schools, for a long period of time, soften and decalcify bones, take from them much earthy matter, causing them to become friable and light, easily bent or broken. After the exorbitant amount of that heat has subsided, then diseased conditions, providing that the patient lives, runs to the other extreme of eburnation. Remember that disease is functions performed in excess or not enough.

Chiropractors understand how a vertebral subluxation can produce the various symptoms named rickets. They also understand that it may be made *before* birth, at delivery in infant, or adult life.

SMALL-POX.

Small-pox and chicken-pox are one and the same disease. A bad case of chicken-pox is a mild case of small-pox. They differ in degree and symptoms as do all diseases in different individuals. All ailments are but the effects of abnormal expression of mental impulses. The quantity is diminished or increased, hence the lack of quality sufficient to maintain a normal. There is not an ache, pain or misery, but are the interpretations of impressions. All acts or movements of any or all parts of the body (including the circulation of the fluids of the body), whether regular or irregular, normal or abnormal, are personifications of mental impulses. What do reach periphery are normal, but the amount is the difficulty. There are no two of us that look alike, no two have the skeletal bones alike. No two whose impressions are alike, hence two kinds of interpretations, hence two different qualities of sensations. If this is true in health, these differentiations are greatly increased when the currents are made abnormal in expression by injury. Therefore, the symptoms of small-pox or chicken-pox vary from an undetermined mild case where there is little or no eruption to resemble small-pox where the eruptions run together.

They are both acute, i. e., progress rapidly, and of short duration. They are both "self-limited," have a definite course and time to run which is not modified by any mode of treatment. The medical schools state that these diseases limit themselves; that no known treatment will abbreviate or materially change their course; that certain symptoms will arise under treatments that are entirely opposite. In other words, these self-limited diseases have their allotted number of days to run under any and all kinds of therapeutical treatment, because not one of these schools, while treating the symptoms, ever think of adjusting the cause.

The spinal cord, as it emanates from the brain, contains all the nerves of the body. These nerves are distributed to various parts of the system passing out through openings along the sides of the vertebræ. These intervertebral foramina, or openings, are liable to be changed in size and shape by various accidents which cause M. D.'s sprain. The vertebral column has fifty-two articular joints that are liable to be displaced while we are asleep or awake. During sleep the nervous system is relaxed, there being no tension, the vertebral column is easily displaced by sudden movements during frightful dreams, causing displacements of some one of the vertebræ; for instance, the stiff neck upon arising and the sudden awakening in the night with a "catch" in the side. These acute ailments may be relieved by one adjustment, replacing the vertebra to its normal position. While we are awake the vertebral column is liable to be wrenched by innumerable accidents.

We have discovered that the continued use of stimulants, such as the smoking of cigars or cigarettes, the chewing of tobacco, the drinking of alcoholic liquors, the use of opium, morphine or cocaine causes a Chiropractic subluxation. This displacement keeps up the depraved appetite. The replacing of this subluxated vertebra restores the current and returns the acquired diseased condition to normal. Now, may there not be a similar cause for small-pox? In all cases that are classed as such that we have had the privilege of examining, we have found a displacement of the fifth cervical, the replacing of which immediately returned all abnormal symptoms to normal.

For explanation I give one case: During the smallpox scare in this city a few years ago the Atlantic hotel was quarantined for three weeks on account of a woman that was discovered, directly after leaving the hotel, to have had small-pox. This case was examined by myself and three students. Some time afterward the landlord's son was confined to his bed by the same disease, only in a much more aggravated form, and not desiring a repetition of the former quarantine, called me. I found a well-marked case of small-pox, and the fifth cervical displaced. I replaced the subluxated vertebra, thereby relieving the pressure on the nerves which caused eruption and fevered condition named small-pox. The next day I found him free from the eruption and fever. On the third day he was on the street, as well as ever.

When it is generally known that a large share of diseases, including small-pox, are caused by subluxations of the vertebræ and that the replacing of these will reduce the temperature to normal and cure the patient, then we will give the death blow to the vaccine poison swindle. Then we will get rid of the Old School Sign Boards, such as "reflex action," "operate," "treat," "vaccine virus" and "self-limited diseases."

SPRAINS.

Dunghlison says that "sprain is the result of a violent straining or twisting the soft parts surrounding the joints."

Any of the joints, including those of the backbone, are liable to be sprained from over-straining.

This affection has been regarded by medical men as incomplete luxation, which we have named Chiropractic subluxation, because of it being brought to a slight separation of two articular surfaces which have not returned to their normal position.

Chiropractors would divide sprains into two classes, those simple wrenches of the joints that are common and get well in a few hours or days, and the chronic. These are the class of sprains that I desire to call your attention to, as they are serious and have for their sequel some of the most grave forms of joint trouble known to medical orthopedists.

The medical concussions of the spine are nothing more nor less than a sprain of the spinal column, a slight separation of the articulations between the lateral processes, possibly of the intervertebral or even those between the heads of the ribs and vertebræ.

It is a common remark that a sprain is often worse than a fracture. A fracture is properly replaced, the fragments are placed in apposition, the right thing is done; with the chronic cases of sprains, rheumatism of a joint, the articular processes of the displaced bones are not replaced.

Sprains of the various joints of the body, especially of the ankle and back, are quite frequent in railroad and other accidents.

Herrick says that in spinal trouble local tenderness is not always prominent, while disturbances of sensation and motion are observed.

Moullin says that in all probability half of the crippled limbs and stiffened joints that are met with every day date their starting point from the occurrence of some apparently trivial sprain. It is the popular impression that these accidents are almost invariably followed by acute inflammation; rightly or wrongly, inflammation is nearly always regarded as the cause. It must be admitted that there is something very unsatisfactory in the results obtained by the ordinary methods of treatment. Even when the greatest care is taken, when every precaution is used, tedious convalescence is the rule, often the joint never recovers at all. He adds, "Arnica, which is frequently recommended, is worse than useless."

One of the most singular features in connection with these sprains is the way in which the backbone is overlooked and ignored. The vertebral column may be strained, especially in the cervical and lumbar regions; the small joints between the articular processes may be twisted and wrenched, disarranging the size and shape of the twenty-five foramina on either side of the spine that gives passage to the nerves from the spinal cord, thereby creating a diseased condition named sprains, or rheumatism. Usually a small area along the spine, about the seat of injury, will be found sensitive on one or both sides. A close examination will discover them made so by compression; they can often be traced by a Chiropractor over portions of the body and out of the limbs where strange feelings are experienced, such as pain, crawling, creeping, tingling and other unpleasant sensations too numerous to mention. Such cases as Page has seen fit to call "railway spine injuries," may be accounted for in this way. Instead of referring them to injury of the spinal cord, they should be attributed to the spinal nerves which have sustained grave injuries at their exit.

A summary of the medical treatment for the effects of a strain is as follows: Elastic stockinette, bandages, massage, plaster bandage, hot air, hot and cold water (depending upon whether it is winter or summer), static electricity, adhesive plaster strap-

ping, elevation, rest, rubefacients, fixation, traction, liniments and poultices. A plaster of paris jacket is used for sprains in the back.

A Chiropractor should look for the cause of a chronic strain the same as he would for that of rheumatism. When he has traced the sensitive nerve from the diseased part of the foramen where impinged, he should release the imprisoned nerves by replacing the displaced articular surfaces. To use any of the above methods would be to show his inability to adjust the cause. He is as dangerous to consult, or more so, than the surgeon, for he has had drilling, whereas the self-mixed, so-call Chiropractic would do bungling and damaging work.

One case will illustrate therapeutic treatment for effects and Chiropractic adjustments for causes.

J. M., a man sixty years of age, came into our office on crutches. In answer to the question, "Well, sir, what is the matter with you?" he answered, "Three years ago a cow kicked me on the left ankle. I managed to walk to the house, but have not been able to bear any weight on the foot since. I have tried several doctors and many remedies, but nothing does it any good."

I examined the ankle and found no displacement or local injury. By pressure above the ankle I discovered the hypersensitive nerve and followed it to the lumbar portion of his back. I tried to explain to him that at the instant of the kick he had jerked his leg away from danger, thereby wrenching his backbone, displacing the vertebra sufficiently to partially close the foramen through which the nerve passed, thereby placing a pressure on the nerve which had its ending in the ankle.

He was not pleased with my explanation. In six months he returned. I remembered his case and found the afflicted nerve at its exit and followed it to the ankle. He still insisted on my treating where the ailment was, and not his back, which he thought was all right. I told him that I did not want to fool away his money and my time.

In three months he returned again. Throwing down a ten-dollar bill he said, "I might as well fool my money here as elsewhere."

After one adjustment of the lumbar vertebra he bore considerable weight on his foot. In time he was able to discard his crutches.

The following short article was in *The Manistique Tribune* of Friday, August 2, 1901. It states the facts as was reported:

TWO SURPRISES.

"While milking my cow three weeks ago I was kicked on the left side above the kidneys. The bruise, instead of getting well in a few days, as is usually the case, became a good deal worse. It would seem as though somebody was cutting the flesh open

from the hip to the ankle whenever I would step upon the left foot. I am sure a real knife cut could not have been more painful.

"The pain would start at the small of my back and run down my entire side and limb. I could do a little light work when seated at a table; I could sew at a table, but I could not sew on my sewing machine, walk or milk my cows. If I started to walk the pain would be so intense I would have to give up and go to bed. I had stomach trouble and no appetite, ate very little; even what I ate distressed me terribly.

"I tried doctors' prescriptions, liniments, patent medicines, which gave me a little relief, but not a cure.

"One day my husband, engineer on tug Gifford, heard of a peculiar doctor who was spending his vacation in Manistique. All he had heard was that he 'punched the back' for ninety-nine out of every hundred diseases. Upon investigation he found that while the theory set forth was peculiar and entirely opposite to anything he had heard of before, yet it was so practical in its application that he decided, as a last resort, to have him treat me.

"It was the examination given by B. J. Palmer that gave me my first surprise. He said the shock that I received from the accident was so severe that it luxated one of the lumbar vertebra of the spine, and that the misplacement was cutting off the supply of those nerves that ran to that side and limb; that those sensory nerves were partially dead for want of mental impulses. And after two weeks' treatment it proved that the philosophy of the science called *Chiropractic*, was right. Although the druggists may laugh at their theories, they are well worth their investigation.

"I give Chiro all the credit for making me a well woman, which was my second, and by far my greatest surprise.

"I would advise anyone suffering with any acute or chronic troubles to investigate Chiropractic while B. J. Palmer is here. Owing to the fact that his vacation will be short, it will be well to investigate at once. He is stopping at Mt. G. K. Keils, on River street.

"MRS. WILL HAZEN,

"Garden Ave., Manistique, Mich."

None but an experienced, specific, pure and unadulterated Chiropractor would have looked for the cause of these ankle and thigh affections in their spines, and only by the adjustment of such would he dismiss these cases well.

WRY-NECK.

Wry-neck, torticollis, obstipitas, colli, or corlum distortum, is a twisted neck, and involuntary deviation of malposition of the head and neck, which are drawn awry, either laterally anterior or posterior. It may be, as classed by orthopedic surgeons, acute

or chronic, constant or intermittent, congenital or acquired. Lateral deviation is the most common and is generally accompanied by more or less rotation of the head.

Orthopedists recognize two different kinds of wry-neck, the congenital, which is inborn, the cause of which is not known by them, and the acquired, caused by contraction of muscles, to which I could add a third kind, caused by caries and changes made by compression of the shape of the vertebræ named by *Tubby* rachitis torticollis, softening of the vertebræ. It is possible that fetal rickets may be associated with some cases of congenital torticollis. With Chiropractors all deformities are acquired; differing in degree and time, whether prenatal or postnatal.

Cooper says, wry-neck should not be confounded with a mere rheumatic tension and stiffness of the neck, nor with the faulty position of the head, arising from deformity of the cervical vertebræ. He recommends a division of the contracted muscles, unless the cervical vertebræ have grown in a distorted direction; if so the deformity cannot be rectified.

In most instances the deformity of the congenital torticollis is slight at birth, and may not attract attention until the child sits or walks. Thus it is often difficult to distinguish the congenital deformity from that which has been acquired in infancy, especially if the distortion has persisted for many years. There is really only the difference of time at which the cervical displacement occurred.

In early infancy slight torticollis may be demonstrated by holding the arm on the affected side and drawing the head forcibly in the opposite direction, when the shortened muscles become prominent beneath the skin, evidently restricting the range of motion.

There ought to be no difficulty in deciding whether the case is one of congenital or spasmodic wry-neck. The real difficulty lies in ascertaining the cause of the spasmodic form.

In a few cases the deformity, even in infancy, may be extreme, showing well marked assymetry of the face and distortion of the skull. Slight assymetry may be present at birth, becoming more marked with its continuance, exhibiting marked atrophy, micromegaly of the affected side. In long standing chronic cases, whether congenital or acquired, as the medical men would say, assymetry of the face is rarely lacking. This first emphasizes the importance of having the misplaced cervical adjusted as soon as possible after the distortion is discovered. The arrested development of the muscles, the affected half of the skull and face is caused by a lack of proper functional currents in the efferent nerves conveying trophic mental impulses, the nerves of that half being deprived of a portion of the normal amount of impulses by occlusion of the foramen thru which they emerge.

Acute or rheumatic wry-neck is accompanied by soreness and pain. The condition usually improves in a few days, but it may reoccur and finally become chronic. The pain is eased by immobilization of the head and increased by any attempt to correct the position. Tenderness may be felt over the articular spinous and transverse processes about the third or fourth cervical vertebræ on the scoliosis.

Bradford and Lovett speak of the muscles on the affected side being shortened by disease from birth. From birth means that the cause was intra-uterine and existed before birth. Disease means symptoms or effects. Chiropractors desire to know that which is the primary cause of the abnormal conditions; others say that in the majority of cases of congenital torticollis a difficult labor has occurred, during which the cervical and other vertebræ have been subluxated. They give a Chiropractic sunbeam when they say, imperfections in the atlas and cervical vertebræ have in some reported cases been the cause of congenital torticollis. Traumatism to the neck and head is at times followed by torticollis; sometimes apparently due to direct injury to the muscles of one side and sometimes to the synovitis of the intervertebral joints. Dislocation of the upper cervical vertebræ is followed, if not corrected, by torticollis. In chronic cases the intervertebral discs and bodies are partly or wholly destroyed or made wedge-shaped, on which osteophytes are formed, resulting in ankylosis of the vertebræ.

Clark says, tubercular diseases of the cervical spine, whether in the alto-axoid region or in the lower cervical vertebræ, may give rise to lateral as well as antero-posterior bending and to simulate wry-neck. In rare instances the head is bent backwards in alto-axoid disease. Rachitis torticollis is due to yielding of the bones softened by rickets, more or less rigidity is present from these changes. Occasionally cases of wry-neck have troublesome neuralgia from inflammation of the nerve trunks as they pass thru the intervertebral foramina. Deviation of the spinal column is seen in this, as in other forms of torticollis. The cervical spine, in cases of congenital wry-neck, exhibits a scoliotic curve. The shape of the bones is so markedly altered that it alone accounts for the persistence of the deformity.

In some diseases we may have acute or chronic retracollis; that is, a drawing of the head backwards without lateral deviation.

A compensatory lateral curvature of the dorsal portion of the spine may result from the cervical curvature.

There may be convulsive contractions varying from an occasional jerk to an almost constant spasm. Pain is intermittent, as a rule.

Bradford and Lovett say that congenital torticollis may exist in connection with other deformities, such as club-foot and similar malformations; that in these cases it seems proper to attribute its existence to those intra-uterine conditions causing the other

co-existing deformities. In other words, he means to say, that if we knew the conditions that caused club-foot and other deformities, we might reasonably conclude that wry-neck be caused by the same. It has been reserved for *The P. S. C.* to discover these intrauterine conditions that cause prenatal distortions. It is, today, the only school teaching this important study, distinctly Chiropractic.

Medical writers give many causes for wry-neck, the most prominent are the following:

McCurdy says congenital wry-neck is caused by injury during parturition, and is always chronic, by which he means that it is incurable.

Clark says that some cases of indurated wry-neck are due to inherited syphilis. There is no doubt that the abnormal attitude depends upon reflex painful contractions of the cervical muscles. These do not explain to a Chiropractor, but when this same writer says that certain affections of the cervical spine, of articular or osseous origin, frequently cause wry-neck, then we think he has caught sight of a Chiropractic sunbeam.

Little says congenital wry-neck clearly originates from prenatal causes, acting thru the nervous system.

McCurdy gives as causes of wry-neck, congenital torticollis, false position of the head during gestation, injury during parturition, and inherited syphilis. Acquired torticollis is a symptom of disease of direct nerve irritation, due to reflex nerve disturbances from carious teeth, otorrhea, or excessive discharge of the ear.

Young says the majority of so-called congenital cases occur at birth from injury. Other causes are deficiency of the cervical vertebræ, malposition of the foetus in utero and heredity. He says that acquired torticollis results from blows, twists in the neck, of the sternal mastoid muscle and violence received during delivery. In rare cases fracture and dislocations of the cervical vertebræ.

Tubby gives as probable cause, spinal caries, cicatrices, rheumatism, congenital, acquired, compensatory, spasmodic, malposition before birth, congenital syphilis, reflex irritation from enlarged glands, carious teeth, otorrhea, neurotic parentage, a fall or blows and malarial poison.

Moore says that torticollis may be congenital or acquired. Congenital cases are doubtless due to injuries occurring at birth. These injuries may be due to muscles, nerves or nerve centers. Many traumatic cases have their origin at the time of birth, bones may be broken or distorted, nerves or nerve centers may be injured. Idiopathic cases are due to causes we do not fully understand. The bones and cartilages in extreme chronic cases may be changed by pressure or atrophy.

Whitman gives as the apparent exciting causes of acquired torticollis, toothache, cervical glands that are enlarged or sup-

purating otitis, collulitis, cold in head, vaccina, fever, injury to the neck, rachitis, syphilis and cicatrical contraction.

Bradford and Lovett state that rickets, Pott's disease, injury to the nerve centers at the time of birth and nerve irritation may be the causes; frequently no definite cause can be found to explain wry-neck. The chronic form may develop from the acute form. It may be a congenital distortion, or it may be of gradual development from any of the thirty-six causes here given, or from no known origin.

Chiropractors understand that all forms of wry-neck, whether prenatal or postnatal, are acquired; that is, they are as much acquired when prenatal as when postnatal. We mean by this that there is a cause before birth, as much so as after. Chiropractors believe that all effects have causes.

In human anomalies we find instances of umbilical cords being of various lengths, even as long as five feet. Infants are often born with the funis wound around some portion of the body, causing uterine amputations of limbs and vertebral displacements. Congenital displacements of the cervical vertebræ are, no doubt, often caused by the cord being wound around the neck. In foetal life the vertebral column is very easy and liable to be displaced. A subluxation of the cervical vertebræ would cause the head to be awry and impinge the nerves passing thru those foramina which are partially occluded.

Bradford and Lovett say that congenital and the acquired forms are, of course, incurable without surgical interference.

McCurdy says, in spasmodic torticollis spontaneous recovery seldom occurs. Under medical or electrical treatment little can be accomplished. Recent methods of operative procedure have placed this most obstinate deformity within the limits of curable affections. The only effective means of curing congenital torticollis is by myotomy of the contracted muscle or nerve resection.

Clark says that the prognosis is always grave. The more severe cases require operative movement.

We have quoted several standard authors on orthopedy to show that they differ very much as to the cause of torticollis. They give more than fifty causes, the most of which are only associate conditions or symptoms. Several of these writers are honest enough to say there is no known cause.

We will sum up what we have learned. Wry-neck is caused by an interference to the fullest expression of all functions in the cervical vertebræ; that subluxation may be before birth, after, or at birth. The lesion consists in a partial displacement of the bodies as well as the articular processes of the vertebræ. distorted vertebræ, by their disarrangement, produce wry-neck. This condition cannot exist without the articular processes separating more or less, in proportion to the displacement. This separation of the articular surfaces may be on one or both sides. If both

articular processes are equally displaced, we will have retrocollis or anterocollis. Where the cervical vertebræ are tilted to one side and the articular process is displaced forward there will be a closing of one foramen, with a corresponding opening of the other; the nerves that pass thru the occluded orifice will be pressed upon by the displaced articular process, causing them to be swollen and enlarged. This depletion of the nerve impulses produces an abnormal action, a contracted condition of muscles and draws the head awry. The impingement of nerves, inducing excessive combustion of osseous structure, may produce caries or a change in the shape of the vertebræ by muscular compression softened by excessive heat.

YELLOW FEVER.

If yellow fever is conveyed from one person to another by the sting of a mosquito, where did the first yellow fever subject get the disease?

What caused the first case of yellow fever? Would not the same poison produce the same disease in all cases?

This reminds me of an Irishman's cow. A lady having made the remark, in the presence of an Irishman, that she would like to own a cow giving milk, that had never calved, the Irishman, with his ready wit, replied, "Bedad, madam, I have the cow you are wanting; she is now giving milk, and never had a calf; neither did her mother before her."

THE MUCOUS MEMBRANES.

Mucous, serous, synovial and cutaneous membranes:

Mucous membranes line the inside surfaces of all hollow organs, canals or tubes that have an external opening.

Serous membranes cover those cavities, internal and external, that do not open externally.

The mucous membranes line the lids of the eyes, nasal passage, the auditory canal of the ear, the Eustachian tubes, the lips, all parts and sides of the mouth, the throat, the trachea (wind-pipe) and bronchial tubes, stomach, gall bladder, tubes of the pancreas and liver, the caecum and the appendix, the bowels and stomach down to and including the anus, the bladder, the uterus, the vagina, the ureter and urethra.

The serous membranes cover the brain, heart, chest, the abdomen, the pleura or outside covering of the lungs, the peritoneum that encloses the viscera of the abdomen.

The mucous membrane has a mucous, slimy fluid. The serous membrane has a thin, watery fluid.

Some of the diseases of the mucous membrane are: granulations of the eyelids, rhinitis of the nose, catarrh of the ear, catarrh of the lungs, which is an affection of the tubes of the lungs, generally known as tubercular consumption; catarrh of the stomach, known as gastralgia; appendicitis, inflammation of the appendix; diphtheria, and croup is an inflammation of the mucous membrane of the throat; and so on with the diseases of the bladder, the vagina and uterus.

In diseases of the serous membrane we have inflammation of the brain, causing sclerosis and mollities, hardening and softening. These diseased conditions of the nerves in the soft tissues are the same that we have been studying in the diseased bones. Of the heart, we have pericarditis, inflammation of the pericardium, the outside membrane or covering, which forms a sack. This smooth membrane is lubricated with a thin, watery liquid called serum. This lubricant prevents friction during its movements. If this membrane becomes inflamed, we have inflammation of the heart, named pericarditis; the result is a tendency to produce and retain too much serum. This unusual amount of held-up serum is named dropsy hydropericardium. The membrane that lines the heart on the inside is liable to be inflamed. This condition is called endocarditis.

All the diseases of the mucous membrane and the serous membrane that we have noticed, and many more, have their primary cause in nerves that are producing too much heat, supplying too much to the membrane that is affected. What we have just said in regard to the cause is as far as an M. D. would desire to go. But we Chiropractors ask what is the cause of this undue amount of heat? We find that if a nerve or a bundle of nerves are being pinched, that there is an abnormal effect of pinched nerve or nerves; that it is too active or not enough. In the diseases noticed there was too much heat, too much action and too much life. Disease is extreme either way.

Cancers come under the head of diseases of the serous membrane.

FRACTURES OF THE SPINAL COLUMN.

Stimson says fractures of the vertebræ are relatively rare, being about 5 per cent; they are extremely unusual in childhood and old age.

Fractures of the vertebræ are uncommon, even more so than the medical men suppose, for many subluxations are thought by them to be fractures.

Cooper says every kind of joint is not equally liable to dislocation. Experience proves that in the greater part of the vertebral column luxations are absolutely impossible.

Boyer has set down that luxation of joints with continuous surfaces is impossible.

We must remember that when an M. D. speaks of a luxation of a vertebra, that he means a *complete* separation of its two articular surfaces, which is usually accompanied with fracture.

Kirkland observes there are some luxations which are far worse injuries than fractures; of this description are dislocations of the vertebræ, which can hardly happen without fracture, and are almost always fatal.

Cooper remarks, the large surfaces with which the vertebræ support each other, the number and thickness of their ligaments, the strength of their muscles, and the vertical direction of the articular processes make dislocation of the dorsal and lumbar vertebræ impossible, unless there be immense violence sufficient to cause fracture of the articular processes. It is certain that most of the cases mentioned by authors as dislocations of the lumbar and dorsal vertebræ have only been concussions of the spinal marrow or fractures of such bones.

The os occipitis and first cervical vertebræ are so firmly connected by ligaments that there is no instance of their being luxated from an external cause, and were the accident to happen, it would immediately prove fatal by the unavoidable compression and injury of the spinal marrow. We find, in *Gray's Anatomy*, that the many joints of which the spine is composed render it liable to sprains.

Don't you forget that the M. D.'s sprain is the Chiropractor's subluxation.

Gray continues: The ligaments that unite the component parts of the vertebræ together are so strong, and these bones are so interlocked by the arrangement of their articulating processes, that dislocation is very uncommon and, indeed, unless accompanied by fracture, rarely occurs, except in the upper part of the neck.

Garrish, in his *Anatomy*, says: "Simple dislocation, between two vertebræ, is almost impossible, unless perhaps in the cervical region, where the surfaces of the articular processes are more nearly horizontal. This is borne out in practice, where we find fracture-dislocation the common injury, the processes of the neural arch being commonly fractured, if not the body itself."

In Vol. 2 of *McClellan's Regional Anatomy*, he says: "Dislocations and fractures of the spinal column are especially grave. A simple dislocation of any of the vertebræ can happen only in the cervical region, as the construction of the dorsal and lumbar vertebræ is such that a dislocation necessarily involves a fracture of some part of the bone. Even in the neck a dislocation is extremely rare. Fractures due to direct violence usually involve only the vertebral arches, the bodies escaping unhurt."

From these quotations of standard authors, you will readily see that the medical profession does not recognize luxation of

any one of the fifty-one articulations of the spinal column. They think that such can only occur as a result of fracture; then they refer to a complete luxation and not to a Chiropractic subluxation.

The bodies may be fractured, obliquely, transversely, or longitudinally; it may be simple, comminuted, or impacted. The injury may concern one or more vertebræ. The body may be crushed, driving a portion of it into the spinal cord. The differential diagnosis of fracture and displacement must usually remain in doubt, for they each present similar symptoms, there being no crepitus to decide.

The prominent sign of spinal fracture is traumatic kyphosis, a displacement with a wound and an abnormal mobility of the fragments.

Herrick says: "It is impossible for any twist, or shake-up, to have sufficient force to fracture any of the vertebræ or their processes, yet direct violence of a blow on the back, or falling across some projection, may cause it."

Beck thinks that fracture of the spinous and transverse processes are extremely rare.

Helferich speaks of fracture of the vertebral bodies being extremely rare, that if the laminæ with spinous and transverse processes not common.

Beck says that fracture of the transverse processes are still rarer than that of the spinous processes, and their recognition is extremely difficult on account of the thick muscular layer protecting them.

From an examination of our large collection of vertebræ we find the healed fractures of the spinous and transverse processes to be quite frequent and about twice the number of the latter as of the former.

Stimson is of the opinion that fractures of one or more of the vertebral processes, either of the same or the adjoining vertebræ, are common.

Howe says that the breaking of the tip end of a spinous or transverse process is not serious. With which I fully agree, because such a fracture does not change the shape nor the size of the foramina thru which the nerves pass where they are liable to be impinged.

Cooper informs us that a fracture of the upper cervical or of the odontoid process is always suddenly fatal.

Gould and Pyle observe that injuries of the cervical vertebræ, while extremely grave, and declared by some authors to be inevitably fatal, are, however, not always followed by death or permanently bad results. Fracture of the lower part of the spine is not always fatal, and notwithstanding the lay idea that a broken back means certain death, patients with well authenticated cases of vertebral fracture have recovered.

Stimson thinks that the fifth and sixth cervical, the last dorsal, and the first lumbar are more frequently broken than any of the others.

The fragments of a fractured vertebræ should be repositioned as near as possible. This will of necessity need careful work and a thorough knowledge of the anatomical construction of the vertebral column. The nurse will need to be very careful in changing the patient's position so that the fragments will not be disturbed until they are thoroughly secured by being healed. owing to the cancellous condition of the bodies of the vertebræ, three months may be necessary for consolidation of the fracture. Where there is a fracture of the processes only, mobilization may not be necessary.

In youth the epipyses of the spinous processes are liable to become separated and absorbed, causing them to appear shortened, giving the impression to the uninformed that of an anterior luxation. An examination of the transverse processes will show that they are in line; therefore, the processes are not displaced.

The diameter of the spinal cord and spinal nerves are considerably less than that of the canal and foramina in which they are located. The spinal cord ends at the first or second lumbar vertebræ, but the cauda equina of nerves continue to distribute the nerve fibers, so that partial occlusion of the vertebral canal or the foramina does not of necessity cause death.

Gould and Pyle state that injury to the spinal cord does not necessarily cause immediate death.

Mills and O'Hara record instances of recovery after penetrating wound of the spinal marrow.

There is a vast difference in impaction of the bodies of the vertebræ which only occur when the bone is in a normal condition, and that of compression when the softened bones have been compressed against each other, changing the shape of the intervertebral cartilage as well as that of softened waxy bodies forcing a portion out on one or more sides or posterior in the spinal canal.

Fractures may be the primary cause of softening a part or all of one or more vertebræ, by impinging the nerves, thereby creating an excessive heat as they pass out of the occluded foramina.

The importance of fractures of the vertebræ to a Chiropractor depends upon the associated injury that is very liable to occur by the occlusion of the spinal canal or its foramina.

Where changes in the size and shape of the vertebral canal or its foramina are caused by fracture or displacements, the results are the same, either of which is very likely to impinge the cord or the nerves emerging therefrom.

If the vertebræ are deformed by impacted fracture, there will be kyphosis or scoliosis.

PNEUMONIA AND EMPHYSEMA.

On February 14 I received a telephone call from Milan, Illinois. I responded; found a rig waiting to convey me ten miles to the home of Mrs. C., a lady eighty-one years of age. I found her suffering for three weeks from pneumonia and emphysema of both lungs. Temperature $103\frac{1}{2}$. Respiration short and rapid, confined to the upper portion of the lungs. Prognosis unfavorable, because of age and of fever having greatly reduced her vital force.

One dorsal adjustment lowered the temperature in one hour to normal. Respiration was diaphragmatic in one and a half hours. She then slept two hours. The crisis had passed, there was now no immediate danger. No more adjustments were needed or given for the inflammatory condition of the lungs.

Five more calls were made to relieve her of catarrhal conditions of the stomach.

The family was so well pleased with the result that Kenneth Burns, a nephew of Mrs. C., is now a student at *The P. S. C.*

Report received today (March 12) states that Mrs. C. is gaining in strength, resting nicely, and no return of fever.

In the above case there was a chronic condition of the stomach known as catarrh. This lack of innervation was due to an impingement of nerves in a foramen on the left side of the spine. Such produced excessive heat in the peripheral ending in the stomach of the digestive nerves, thickening the mucus of the mucous surface by drying.

Similar conditions were the cause of the abnormal heat of the lungs, only that the occluded foramen was higher in the dorsal.

Acute diseases are relieved by one or two adjustments; whereas, chronic cases take more time, because of changes made in the osseous structure.

“ONE DISEASE FOR ANOTHER.”

The *Medical Standard*, under “Adversity makes strange bed-fellows,” says: “The Mexican scientists have discovered that the tapeworm prevents the organism from being infected with tuberculosis bacilli. To establish the efficiency of the remedy the physicians injected the live cure into several patients, all of whom recovered.”

The tapeworm eats the tuberculosis bacilli. That is the Allopathic conception of *ridding* the body of disease. War. A fight on hand. One disease to combat another. Allo—one, and pathy—disease. One disease for another.

DRUNKENNESS.

A copy of the following was sent to *Deed and Double*. We thought it good enough for reproduction in *The Chiropractor*:

Editor of *Deed and Double*: Please allow me to further explain, by relating one case, in order to show how displacements of the spine may cause an abnormal appetite for strong drink.

In our adjustments for stomach troubles, patients occasionally report a change of appetite. It is a well-known fact that many persons, upon recovery from disease, find a change in their likes and dislikes for food and drink.

In Chiropractic, not "Chiropractice," we find nerves control all functions, appetite being one of them. That function may be deranged, the appetite abnormally increased or decreased, or a craving for unusual substances. The call for stimulants being one of them.

On one occasion, H. A. came to me to be adjusted, *i. e.*, have a displaced vertebra replaced, an impingement taken from the nerves; the spinal foramen was occluded, lessening the size of the opening through which certain nerves emerged. It is a Chiropractic fact that undue pressure on nerves deranges their action and sensation.

At the fourth adjustment he said, "The odor coming from a saloon always had an inviting effect, so much so that I sometimes could not resist the desire of going in and taking a drink; then I was in for a drunken spree. But now that smell is nauseating, repellant, instead of inviting."

This case is but one of many which I might refer to.

IS CHIROPRACTIC ADJUSTMENT PERMANENT?

Why is it necessary to give daily adjustments upon the same vertebra for several weeks? If placed into position once, why doesn't it stay?

These questions must be definitely answered by showing what keeps the vertebra out of place and what change must take place to hold it in position after proper adjustments have been given. I think Dr. Palmer is able to explain this in a scientific manner so that we understand the principles and also prove by examples from his. I will be pleased to have this answered in *The Chiropractor*.

This question can be answered in two ways: By comparison and scientifically. The last *Chiropractor* gave two crude illustrations of everyday experience. That answer was intended for the laity, which would not be satisfactory to a Chiropractor or a scientific investigator.

To intelligently pursue the study of why vertebræ remain out of position for weeks, months or years and why one week or three months' adjustments are necessary to correct its position, it becomes necessary to have a large osteological collection of abnormal vertebræ under all manners of conditions. Fractures, osteomalacia, fevers, caries, and many other diseases and their subsequent abnormal or accommodating qualifications, must be studied to their fullest thoroughness. For this purpose *The P. S. C.* has the largest collection of abnormal specimens of the vertebral column in the world. *No Chiropractic education is complete when minus Chiropractic Orthopedy.*

When we speak of a vertebra being subluxated, we refer to its being partially separated, more or less, from the one above or below. As to whether posterior, anterior, left or right lateral, depends upon which one we refer to.

The various curvatures, scoliosis, kyphosis and lordosis are made by a great diversity of several abnormally-shaped vertebræ, which cannot be studied without appropriate specimens representing each kind. Add to these those varying in consistency from the softness of cheese, in osteomalacia, to those as hard as ivory in specimens which have become eburnated.

A part or all of the vertebral column may be softened by superheat, a portion of the bone may ooze out and be deposited on the surfaces, by fusion, causing morbid enlargement and ankyloses. When the heat becomes less than normal, hardening, consolidation and eburnation follow.

Each of the following need special attention: Fractures, exostoses, ankyloses, and carious vertebræ. They make wedge-shaped specimens. It might be lateral or antero-posterior in direction. Then exostoses may, in addition, lock vertebræ in these conditions. This wedge-shape may be slight or great, needing a series of adjustments accordingly. The first few gradually make the ankyloses give way. The time needed to achieve this may cover a period of one or two weeks, perhaps longer, during which the patient has improved but little, if any. Why? You have not, as yet, separated the two vertebræ that are pinching nerves. The exostosis broken, the normal position is soon reached, pressures released, health follows.

Exostoses and ankyloses are interesting studies. They are removed by appropriate adjustments, the how and the why of which must be thoroughly understood before starting a case; if not, serious damage often results. Vertebræ which have been fractured cannot be returned to normal position. Many so-called fractures of the spine are severe subluxations which a competent Chiropractor can adjust and correct. The M. D., calling it fracture, does not make it so. He has no knowledge of subluxations or their attendant symptoms.

Vertebræ destroyed by caries can be returned to normal shape. Chiropractors are the first school that claims and proves

by demonstrations that this can be fulfilled by intelligent adjustment of its cause.

It is interesting, to a pathologist, to note the various changes and shapes of the different parts of the vertebræ, of the adaptation to some displacement which Innate was not able to adjust, and the physician did not know how. This intelligence displays much and varied intellect in the many locks found in the vertebral column to prevent the further displacement of an already subluxated vertebra, one of which is as nice a dovetail as any artificer could make. Very many times we find vertebræ ankylosed by osseous symphyses for the purpose of preventing further displacement. Innate is not a mechanic, therefore, cannot replace them.

The above conditions are found in the majority of chronic cases, in more or less condition. All acute diseases can be immediately corrected "While you wait," because the vertebræ are not deformed in shape or consistency. Let this subluxation stand permanently, followed by a combination of symptoms, and the change in shape is inevitable. To correct this is what necessitates a few weeks' adjustments. The replacing, once, if a chronic subluxation does not hold it; continued work returns the old normal shape; hence, the return to natural position. Health is the positive result.

To intelligently pursue the right course, the Chiropractor must know what condition exists in every case before he commences work. His diagram of procedure must be previously arranged. Every graduate of *The P. S. C.* has had most thorough drilling in examining and studying hundreds of such specimens, each of which is made practical by describing the etiology, analysis and prognosis and how to attain it by the intelligent application of certain Innate principles which previously had been interfered with.

EVERY DAY DICTIONARY.

The following is a list of the technical terms used in the teaching of the different subjects by the different Faculty members. The definitions are short and concise, giving the student a general idea of the terms without having to read a long definition. It is not intended that this list should take the place of a dictionary, but to place in the hands of the student the words most often used, with the definition most easily understood. For more exhaustive definitions the student is referred to any standard dictionary.

- Abaplerosis*—Cicatrization, *i. e.*, the process of forming a cicatrix. Repletion, granulation in healing.
- Abrasion*—Superficial excoriation, the rasping or wearing away of skin by friction or attrition.
- Absorption*—(noun) (Absorbed, adj.) Act of sucking up or imbibing.
- Achromatic*—Devoid of color.
- Acne*—Inflammation of sebaceous glands, with accumulation of secretion.
- Acrid*—Burning or pungent.
- Acromegaly*—Marie's disease, characterized by enlargement of feet, hands and face, with thickening of soft parts.
- Acrophobia*—Morbid fear of heights.
- Adenitis*—Inflammation of a gland.
- Adeno-*—A prefix denoting relation to glands.
- Adenoid*—Resembling or relating to a gland.
- Adenoma*—Adenoid tumor.
- Adhesion*—Union of parts, as the union of the opposing surfaces of a wound.
- Adipose*—Relating to fat.
- Adolescence*—Youth: period between puberty and that at which the body acquires its full development.
- Afebrile*—Without fever.
- Afferent*—Toward the center.
- Ala*—Wing-like.
- Alae*—Plural of ala.
- algia*—A suffix denoting pain.
- Alveolar*—Relating to the sockets of the teeth.
- Alveoli*—Pits or depressions. (Plural.)
- Alveolus*—A small hole or cavity. (Singular.)
- Amaurosis*—Total blindness without discoverable lesion in the eye structures of optic nerve.
- Amnesia*—Loss of memory.
- Amnion*—Innermost enveloping membrane of the foetus.
- Ampulla*—Flashlike, dilatation of a canal.
- Anabolism*—Constructive part of metabolism; the process of assimilation of nutritive matter and its conversion into living substance.

- Analgesia*—Insensibility to pain.
Analogous—Conforming or answering to.
Analysis—Resolving into elements.
Anasarca—General dropsy.
Anastomosis—Communication between vessels.
Anemia—Deficiency of blood characterized by lack of red corpuscles.
Anatomy—Science of organic structure.
Anesthetic—Agent that prevents feeling.
Anesthesia—Paralysis of sensibility.
Aneurysm—Tumor formed by rupture or dilatation of coats of an artery.
Angina—Sense of suffocation.
Angio-—A prefix denoting relation to a vessel.
Ankylosis—Joining of two parts by bony union causing a stiff joint.
Anomalies—Noun, plural. Irregularities, abnormalities.
Anomalocephalous—(Adj.) Having a deformed skull.
Anomalocephalus—A deformed skull.
Anomalous—Deviating from the general rule. Abnormal, irregular.
Anomaly—Irregularity; deviation from specific type.
Anorexia—Absence of appetite.
Anosmia—Loss of smell.
Anthrax—Carbuncle.
Anti-—A prefix meaning against.
Anticus—Anterior.
Antidote—An agent which counteracts the effects of a poison.
Apex—(Singular.) A tip or angular point.
Aphasia—Partial or complete loss of language by tongue, ear or pen.
Aphonia—Loss of voice.
Apices—(Plural.) Tips or points.
Apnea—Absence of respiration.
Apo-—A prefix denoting from, away, separation.
Apophysis—A process of bone having no independent center of ossification.
Appendectomy—Operation for removal of appendix.
Appendicitis—Inflammation of appendix.
Appendix—An appendage.
Apraxia—Defective memory as to objects and their uses.
Apyrexia—Without fever.
Arteriosclerosis—Hardening of especially the inner coat of the arteries, thickening of the walls of an artery.
Arthralgia—Pain in joint.
Arthritis—Inflammation of a joint.
Arthro-—Prefix denoting relation to joints.
Arthrocase—Disease of the joints, caries of the articular surfaces.
Arthrodesis—Ankylosis of a diseased or sound joint for firmness and solidity, artificial.

- Arthropathia*—Disease of a joint.
Arthorpathy—Disease of a joint. (Charcot's disease, tabetic arthropathy.)
Arthropology—Science of man.
Ascites—Abdominal dropsy.
Asepsis—State of non-putrefaction.
Asphyxia—Suffocation.
Asthenia—Want of strength; debility.
Asthenic—Relating to asthenia.
Astigmatism—State of unequal refraction of the eye in which the rays are not brought to one focus.
Astringent—An agent producing contraction of organic tissues.
Asymmetrical—Not even, not in order.
Asymmetry—Absence of usual similarity.
Atlas—(singular.) The first vertebra of the neck.
Atlases—(plural.)
Atleo- —A prefix denoting imperfect development.
Athymia—Despondency: groundless fear.
Atlanto- —A prefix denoting relation to atlas.
Atloldo—In composition same as atlanto.
Atrophic—Relating to atrophy.
Atrophy—Progressive diminution of the bulk of the whole or part of the body.
Attrition—Wearing away by friction or rubbing.
Auricular—Refers to ear.
Auris—Ear.
Auscultation—Examination by listening.
Auto- —Prefix meaning self, of itself.
Axial—Pertaining to axis.
Axillary—Relating to the arm pits.
Axes—(plural.) *Vertebræ dentatæ*.
Axial Line—A line passing through the center of the body vertically.
Axis—(singular.) Second vertebra of the neck.
Axo- —A prefix meaning axis.
Bi- —A prefix meaning two, twice, double.
Bifid—Forked.
Bio- —A prefix meaning life.
Biology—Science of life and living things.
Blenno- —Prefix meaning mucus.
Bloody Flux—Dysentery.
Brachium—Upper arm.
Brady- —Prefix, meaning slow.
Bradycardia—Abnormal slowness of pulse.
Brevis—Short.
Bronchitis—Inflammation of the bronchial tubes.
Bubo—Swollen inguinal gland.
Bucca—Cheek.
Bulimia—Insatiable hunger.

- Cachexia*—A state of malnutrition.
Caco-—A prefix meaning bad or diseased.
Cadaver—A dead body.
Caecum-cecum—Blind pouch.
Calorific—Heat producing.
Calvaria—(plural.) Tops of skulls.
Calvarium—(singular.) Top of skull, skull-cap.
Cancellous—Cancellated, having cellular structures, like lattice work, e. g., spongy bone.
Canker—Violent or corrosive ulceration.
Caput—Head.
Carcinoma—Cancer.
Cardiac—Relating to the heart.
Cardialgia—Burning sensation in the stomach. Heartburn.
Cardiodynia—Pain in heart.
Carditis—Inflammation of heart.
Caries—Ulceration of bone. Molecular decay of bone.
Carious—Affected with caries.
Carpo-—A prefix meaning of or pertaining to the carpus.
Carpus—The wrist.
Catamenia—Menses.
Catarrh—Inflammation of a mucous membrane.
-cele—A suffix denoting a tumor or swelling or hernia.
Centra—(plural.) Bodies of vertebræ.
Centro-—A prefix meaning central.
Centrum—(singular.) Body of a vertebra.
Cephalad—Toward the head.
Cephalodynia—Pain in head.
Cervico-—A prefix meaning relation to the neck.
Cervicodynia—Pain in neck.
Cervix—Neck or constricted part.
Chancre—Syphilitic ulcer.
Chicken Breasted—Bent forward; pigeon-keel-shaped.
Chiropractic—The science of cause of disease and art of adjusting by hand all subluxations of the three hundred articulations of the human skeletal frame, more especially the fifty-two articulations of the spinal column, for the purpose of freeing impinged nerves, as they emanate through the intervertebral foramina, causing abnormal functions, in excess or not enough, named disease.
Chiropractic Orthopedy—Correcting deformities by adjusting the cause by hand.
Chol-—Prefix meaning bile.
Chondro-—Prefix meaning relating to cartilage.
Chondrodystrophia—Softening of cartilage (fœtal rickets).
Chondroma—Cartilaginous growth or tumor.
Chondrodystrophy—Achondroplasia. A disturbance in the normal process of ossification in cartilage.
Chondromalacia—Softening of cartilage.

Chronic Tubercular Osteomyelitis—Inflammation and nodules in marrow of bones.

Chorea—St. Vitus dance.

Chroma—Prefix meaning colored.

Chronic—Of long duration.

Cicatrix—Scar.

Cicatrices—(plural.)—Scars or marks of a healed wound.

Cilia—Eyelashes: hair-like processes.

Circum—Prefix meaning around or about.

Cirrhosis—Thickening of the connective tissue of an organ.

Climacteric—Relating to times of life regarded as critical.

Clinocephalia—Flathead, caused by synostosis of bones. Saddle head.

Clonic Spasm—Convulsion with alternate contraction and relaxation of a muscle.

Coagulation—Converting into jelly-like mass; clotting.

Coccygearthrosis—Dislocation of the coccyx.

Coccyges—Plural of coccyx.

Coccygodinia—Pain in the coccyx (os coccygis).

Coccyx—(singular.)—All vertebræ below the sacrum.

Collum—Neck.

Colotomy—Incision into the colon.

Coma—Profound unconsciousness.

Comedo—A blackhead.

Compression—Act of pressing together.

Concussion—Shaking, commotion (suddenly).

Condensation—Increase of density.

Confluent—Running together.

Congenital—Existing at birth.

Contagious—Transmitted by direct or indirect contact.

Convalescence—Period of recovery.

Cornu—(singular). Small horn-like projection.

Cornua—(plural.) Small horn-like projections.

Corrosive—A substance that eats away or destroys.

Coryza—Cold in the head.

Costal—Relating to a rib.

Costo—A prefix denoting connection with ribs.

Cotyloid—Cup-shaped.

Coxalgia—Pain in the hip.

Coxitis—Inflammation of hip-joint.

Cramp—Sudden involuntary and painful contraction of muscle.

Cranio—A prefix relating to the cranium.

Craniectomy—Exsection of a portion of the skull.

Craniotomy—1. Breaking up of foetal skull. 2. Trephining.

Craniomalacia—Softening and thinning of skull bones.

Craniostosis—Ossification of sutures. Synostosis.

Craniostenosis—Contraction of skull. (Microcephalus.)

Craniotabes-calvarium—Thinning in places and softening of the bones of the skull.

Cranitis—Inflammation of cranial bone.

- Crest*—Surmounting part of a bone. A ridge.
Cretinism—Mentally and physically dwarfed.
Crico-—A prefix denoting connection with cricoid cartilage.
Crisis—Sudden change in course of disease.
Crucial—Resembling a cross.
Crura—Plural of crus—leg-like structures.
Cutaneous—Resembling, composed of, or belonging to the skin.
Cuticle—Membrane which covers whole surface of body.
Cyano-—A prefix meaning blue.
Cyanosis—Blueness from lack of oxygen in blood.
Cyphoma—Gibbosity of spine, humpback.
Cyphosis—Posterior curvature. Kyphosis.
Cystic—Relating to a cyst, or cysts, the bladder or gall bladder.
Cysto-—A prefix denoting relating to bladder.
Cystitis—Inflammation of bladder.
De-—Prefix denoting down, away from.
Decalcification—Depriving of lime or calcareous matter.
Deformans—Deforming.
Deglutition—Act of swallowing.
Dementia—Incoherent, insanity.
Demi-—Prefix meaning half.
Denudation—Making bare. Denuding process.
Denuded—Cleared of. Undressed.
Dermatology—Science of skin.
Dermatitis—Inflammation of skin.
Dermato-—Prefix signifying pertaining to the skin.
Dengue—Break bone fever.
Dentate—Having tooth-like processes, notched.
Deodorize—To remove odor.
Depuration—Process of purifying, either by some eruptive disease or spontaneous evacuation.
Desmo-—Prefix meaning a band, or ligament.
Desquamation—Separation of the epidermis in the form of scales.
Dexter—Right.
Dextro-—Prefix meaning right.
Di-—Prefix meaning two or twice.
Diabetes Insipidus—Excessive urination not containing sugar.
Diabetes Mellitus—Excessive urination containing sugar.
Diagnosis—Grouping of symptoms and giving them a name.
Diaphoresis—Greater degree of perspiration than natural.
Diaphoretic—Agent which increases secretion of sweat.
Diaphysis—Shaft of a long bone.
Diaphysitis—Inflammation of diaphysis.
Diapophysis—Articular part of the transverse process of the vertebræ.
Diastasis—Forcible separation of bones.
Diastole—Period of dilation of heart.
Dicrotic—Double beating of heart.
Dichotomy—Dividing in two.

- Dietetic*—Pertaining to diet.
Digastric—Having two bellies.
Digit—Finger or toe.
Diplegia—Double paralysis.
Diplo-—Prefix meaning double.
Diplogenic—Prenatal double. Pertaking of the nature of two bodies.
Diplogenesis—Duplication of parts, a monstrosity by duplication.
Diplopia—Double vision.
Dis-—Prefix meaning two or double, apart from.
Disinfection—Destruction of germs in clothing or enclosed spaces.
Dislocation—Displacement of the bones at a joint.
Disordered Nutrition—Heterotrophia.
Distal—Farthest from given center.
Diuretic—Agent to increase secretion of urine.
Dorsad—Toward the back.
Dorsal—Relating to the back of the body.
Dorso-—Prefix used to signify pertaining to the back.
Dorsum—Back.
Duipara—Woman with two children.
Dynamic—Endowed with power.
Dynia—Pain.
Dys-—Prefix meaning bad, hard, difficult, painful.
Dysentery—Inflammation of large intestine, with frequent mucous or bloody evacuations.
Dysmenorrhoea—Painful or difficult menstruation.
Dyspepsia—Difficulty of digestion.
Dysphagia—Difficult swallowing.
Dyspnea—Difficult breathing.
Dystrophia—Imperfect or defective nutrition.
Dysuria—Difficult and painful urination.
E-—Prefix denoting without, from.
Eburnation—Morbid change in bone by which it becomes ivory-like.
Ecchondrosis—Cartilaginous growth. Chondroma.
Ecchymosis—An effusion of blood in areolar tissue.
Eclampsia—A convulsive seizure in which consciousness is not lost.
Ectad—Toward the surface of the body.
Ectal—Relating to the exterior.
-ectomy—A suffix denoting to cut out.
Ectopic—Out of place.
Edeitis—Inflammation of generative organs.
Edema—Accumulation of serum in cellular tissue.
Efferent—Away from the center.
Elephantiasis—Chronic disease marked by abnormal increase in size of skin and subcutaneous tissue.
Emaciation—Leanness.

Embolism—Obstruction of blood vessel by body detached from interior of heart or vessel and carried by current to point of obstruction.

Embolus—Body which gives rise to embolism.

Embryology—Science of embryonic evolution.

Emesis—Vomiting.

Emetic—An agent capable of producing vomiting.

-emia—A suffix relating to the blood.

Empyema—Collection of pus in a cavity.

Emprosthotonus—A contraction of the flexor muscles causing the body to be drawn forward.

Encephalo-—Prefix meaning relating to the brain.

Enchondroma—Cartilaginous tumor of bone; mata (plural).

Endemic—Prevalent in a locality.

Endo-—Prefix meaning within.

Endocarditis—Inflammation of lining membrane of heart.

Endosmosis—Action by which fluids pass from without or within.

Enema—Injection into the lower bowel.

Entad—Toward the interior.

Ental—Relating to the interior.

Enteralgia—Pain in bowels.

Enteritis—Inflammation of intestines.

Entero-—A prefix denoting relation to the intestines.

Enterodynia—Pain in intestine.

Enteroptosis—Prolapse of the intestines.

Enterosis—Disease of the intestines.

Enuresis—Involuntary discharge of urine.

Ephamera—That which continues for a day.

Ephemeral—Lasting for a day.

Epi-—A prefix meaning upon.

Epidemic—Prevailing simultaneously among a large number in a community.

Epiphysis—Portion of bone separated from body of bone by plate of cartilage which later becomes converted into bone.

Epiphysitis—Inflammation of the epiphyses.

Epistaxis—Nose bleed.

Epithelioma—Morbid growth of epithelial cells.

Erosion—Wearing away. Abrasion.

Eructation—Belching of gas.

Eruptive—Accompanied by evacuation of fluid.

Erosion—Gradual destruction by action of corrosive substance or by friction.

Erysipelas—Disease characterized by superficial inflammation of the skin.

Erythema—Inflammation blush.

Erythro-—Prefix meaning of a red color.

Etiology—Science of the causes of disease.

Eupnea—Normal respiration.

Exfoliation—Separation of dead portions of bone by scales.

- Ex-* —Prefix meaning out of, away from.
- Exo-* —Prefix meaning without, outside.
- Exosmosis*—Action by which fluids pass from within to without.
- Exostosed*—Having exostosis.
- Exostoses*—(plural.) Bony tumors or abnormal growths. New growth of bone on bone.
- Exostosis*—(singular.) Any protuberance of bone that is not normal.
- Exostosis Eburnea*—Quality of and looking like ivory. Hard osseous tumor.
- Expiration*—Action by which air is expelled from the lungs.
- Extirpation*—Complete removal or destruction of any part.
- Extra-* —Prefix meaning without, outside.
- Extrinsic*—Outward, external.
- Exuberant*—Growing to excess.
- Exudate*—Material which has oozed out through the skin.
- Exudation*—Oozing of a material through the pores of a membrane.
- Facet*—A small plane articulating surface.
- Febrile*—Relating to fever.
- Fervescence*—Increase of fever.
- Fetid*—Having a bad smell.
- Fever*—Temperature above normal.
- Fever-high*—103-104.
- Fever-intense*—104-106.
- Fever-intermittent*—Recurring at intervals.
- Fever-moderate*—101-103.
- Fibrinous*—Having the properties of fibrin.
- Fibro-* —Prefix, relating to fibres or fibrous tissue
- Fimbriated*—Fringed.
- Fistula*—Abnormal tube-like passage in the body, giving vent to pus or other secretion.
- Flatulence*—Formation of gas in digestive tube.
- Foramen*—(singular.) Opening in a bone or between bones giving passage to nerve or blood vessels.
- Foramina*—(plural.) Openings.
- Fossa*—A depression, the entrance to which is always larger than its base.
- Fovea*—A small depression.
- Fracture*—Breaking of bone.
- Fracture-complete*—Where bone is broken clear through.
- Fracture-complicated*—Where there is injury to surrounding structures, large vessel, nerve trunk, etc.
- Fracture-compound*—Where the bone protrudes.
- Fracture-double*—The bone broken in two places.
- Fracture-greenstick*—Incomplete break in which bone is bent.
- Fracture-impacted*—One end of bone is driven into the other.
- Fracture-simple*—Where the bone only is divided.
- Fracture-spiral*—Where the bone is twisted.

- Fracture-spontaneous*—From slight injury the bone being already diseased.
- Fragilitas Ossium*—Brittleness of bones.
- Friction*—Rubbing.
- Fungoid*—Having the shape of mushroom.
- Funnel-chest*—Sternum depressed.
- Fraenum*—Membranous fold which retains many organs.
- Fremitus*—Palpable vibration, as of the chest walls.
- Frigorific*—Cold producing.
- Fronto-*—A prefix meaning anterior position, or a relation with the forehead
- Gangrene*—Local death: livid discoloration.
- Gastralgia*—Pain in stomach.
- Gastritis*—Inflammation of stomach.
- Gastro-*—A prefix meaning relation to the stomach.
- Gastroplegia*—Paralysis of stomach.
- Gastroptosis*—Prolapse of the stomach.
- Genito-*—Prefix signifying relation to the genital organs
- Genu*—Knee.
- Genu Valgum*—Knock-knee.
- Genu Varum*—Bowleg.
- Gibbous*—Humpbacked.
- Glaucoma*—Opacity of vitreous humor.
- Glossa*—Tongue.
- Glosso-*—Prefix meaning the tongue.
- Gonalgia*—Pain in knee.
- Gonitis*—Inflammation of the knee.
- Gonorrhea*—A specific inflammation, accompanied by discharge of mucous and pus from membrane of urethra in man, and from vagina more especially in woman.
- Gout*—Affection of joints accompanied by deposit of urate of sodium, attacks great toe first.
- Gynecology*—Science of diseases of women.
- Hectic*—Habitual.
- Hematophobia*—Morbid fear of blood.
- Hematuria*—Voiding of blood with the urine.
- Hemi-*—A prefix meaning half.
- Hemicentrum*—Half the body of a vertebra.
- Hemophilia*—Tendency to spontaneous bleedings.
- Hemiplegia*—Paralysis of one side of body.
- Hemoptysis*—Spitting of blood.
- Hemorrhage*—Bleeding.
- Hemorrhoid*—A pile or single pile tumor
- Hepar*—Liver.
- Hepatalgia*—Pain in liver.
- Hepatico-hepato-*—Prefixes meaning belonging to or relating to the liver.
- Hepatitis*—Inflammation of liver.
- Hepatocoele*—Hernia of liver.

- Hepatoptosis*—Prolapse of the liver.
- Heredity*—Transmitted from progenitors.
- Hernia*—Rupture.
- Herpes Labialis*—Cold sore on the lip.
- Heterogeneous*—Dissimilar. Not alike. Of a different kind.
- Heteromorphous*—Of different form.
- Hetero-* —Prefix denoting unlikeness.
- Hebetude*—Dullness of intellect.
- Hiccup*—Noise made by the sudden contraction of the diaphragm and closure of the glottis.
- Histo-* —Prefix denoting relation to tissue.
- Histology*—Science of minute anatomy.
- Homeo-* —Prefix denoting likeness.
- Homogeneous*—Of the same kind. From the same source.
- Homogenetic. Homologous, like in structure.
- Hyal-* —A prefix meaning transparent.
- Hydatid*—Watery cyst.
- Hydra-hydro-* —Prefixes signifying presence of water.
- Hydro*—Water.
- Hydrocele*—Collection of serum in scrotum.
- Hydrocephalus*—Dropsy of brain.
- Hydroderma*—Dropsy of skin.
- Hydroid*—Resembling water.
- Hydrology*—Science of water.
- Hydroma*—Cyst filled with serous fluid.
- Hydronephrosis*—Renal dropsy from obstruction.
- Hydropathy*—Treatment of disease by use of water.
- Hydrophobia*—Morbid fear of water.
- Hydorrhachitis, Hydrorrhachis, Hydrorachis* — Inflammatory dropsy of the spinal cord.
- Hydrotherapy*—Use of water in treating disease.
- Hydrothorax*—Dropsy of chest.
- Hydruria*—Increase in watery constituents of urine.
- Hygiene*—Science of the prevention of disease and promotion and preservation of health.
- Hyo-* —A prefix denoting attachment to or connection with the hyoid bone.
- Hypapophysis*—Bony process from inferior surface of vertebræ in some animals.
- Hyper-* —Prefix signifying, above, beyond or excessive.
- Hyper*—Excessive.
- Hyperacusis*—Morbid acuteness of sense of hearing.
- Hyperemia*—Increased amount of blood in a part.
- Hyperesthesia*—Excessive sensibility.
- Hyperostogeny*—Excessive growth of bone.
- Hyperostosis*—Too much bone.
- Hyperplasia*—A hypertrophy of tissue.
- Hyperpyrexia*—Excessively high temperature.
- Hypertonia*—Over tension: great tonicity.

Hypertrophy—Over nutrition, morbid enlargement, abnormal increase.

Hypno-—A prefix signifying relation to sleep or to hypnotism.

Hypo-—A prefix signifying deficiency or lack below or beneath.

Hypochondriac—One affected with a morbid anxiety regarding health.

-iasis—A termination denoting a process or its results.

Icterus—Jaundice.

Ichthyosis—Fish skin disease.

Idiopathic—Of unknown origin.

Idiosyncrasy—Individual peculiarity.

Ileo-—Prefix, relation to the ileum.

Ileum—(Twist.) Lowest portion of small intestines.

Iliaco-—Prefix, relation to the loins.

Ilio-—Prefix, denoting relation to the ilium.

Immune—Safe from attack.

Imperforated—Not having an opening.

Impetigo—Acute pustular inflammation of the skin.

Impotency—Loss of sexual power.

In-—Prefix signifying in or within, negation, intensive action, or denoting fibrin or fibrous tissue.

Incineration—Cremation.

Incipient—Beginning.

Incoordination—Out of harmony.

Incubation—Period between infection and appearance of disease.

Infantile—Relating to infancy.

Infectious—Transmitted by direct contact.

Infra-—A prefix meaning below or beneath.

Infra Costal—Below ribs.

Infra Maxillary—Lower jaw.

Infundibulum—Funnel-like.

Inguinal—Relating to groin.

Inguino—In composition, pertaining to the groin.

Inhibit—To check.

Innate—Born with. Inborn.

Innate Intelligence—That superior intelligence, voluntary itself, yet involuntary to the Educated Intelligence, which controls all internal function of the body.

Innominatus—Nameless.

Insidious—Progressing imperceptibly so as not to be recognized until well developed.

Insomnia—Sleeplessness.

Inspection—Examination with the eye.

Inspiration—Action by which air penetrates into the lungs.

Intra-—Prefix meaning within.

Intracellular—Within cells.

Intraosseous—Within bone.

Intraversical—Within bladder.

Inter-—Prefix signifying between.

- Intercellular*—Between cells.
Intercostal—Between ribs.
Interosseous—Between bone.
Intrinsic—Inward: internal.
Intro- —Prefix signifying within.
Irido- —Prefix signifying relating to the iris.
Ischemic—Relating to or caused by local anemia.
-itis—Suffix used to denote inflammation.
Jugular—Pertaining to the throat.
Kata- —Prefix denoting down or intensive.
Katabolism—(also Catabolism.) Tearing down process of living tissue. Opposite of anabolism.
Kerat- —Prefix denoting relating to the cornea or to horn.
Kyphosis—Posterior curvature of the spine.
Labio- —Prefix meaning pertaining to the lip.
Lacinated—Fringed.
Lamina—(singular.) Plate, table, lamella of bone.
Laminae—Plural of lamina.
Lapro- —Prefix denoting loins, sometimes used with reference to the abdomen.
Laryngitis—Inflammation of larynx.
Laryngo- —Prefix relating to the larynx.
Latero—Prefix signifying to one side: lateral.
Lentigo—Freckles.
Lenko- —Prefix meaning white.
Lepido- —Prefix signifying a scale or scaly.
Pepto- —Prefix meaning thin.
Lesion—Morbid change in function or texture of organs; derangement.
Leucocytosis—Increase in number of white corpuscles of a temporary nature.
Lieno- —Prefix meaning relating to the spleen.
Ligature—Material used for tying.
Linea—Line.
Lingula—Tongue-like.
Lipo- —Prefix meaning fat or fatty.
Lipoma—Fatty tumor.
Litho- —Prefix denoting relation to stone or calculi.
Lobar Pneumonia—Pneumonia characterized by deposit in air cells, may involve one lobe or the lobes of both lungs.
Lobular—Having lobes.
Logo- —Prefix relating to words or speech.
Longus—Long.
Lordosis—Anterior curvature of the spine.
Lumbago—Soreness of the lumbar muscles.
Lumbus—Loin.
Lumen—The cavity of a tubular structure.
Lupus—Eating ulcer of the skin.
Luxation—Dislocation.

- Lympho-*—Prefix relating to lymph or to the lymphatic glands.
Lymphocytes—Lymph corpuscle.
Lysis—Gradual termination of disease.
Macro-—Prefix meaning large, long or great.
Macular—Spotted.
Magnus—Large.
Mal-—Prefix meaning bad.
Malacia—Softening.
Malaise—The feelings of discomfort preceding disease.
Malignant—A disease of very serious character.
Malformation—Abnormal formation of structure.
Mania—Raving or furious madness.
Massage—A manipulation treatment of the body by friction, kneading, pressure, etc.
Masseur—Male operator, manipulator.
Masseuse—Female operator, manipulator.
Masto-—Prefix signifying relating to the breast.
Mastoiditis—Inflammation of the mastoid cells.
Maximus—Greatest.
Meconium—The excrement passed by the newborn infant.
Median Line—Middle, Median, vertical line dividing the body into two equal parts.
Medio-—Prefix meaning middle.
Medullitis—Inflammation of marrow of bone.
Melano-—Prefix signifying black or dark colored.
Melancholia—Gloom, depression.
Menngitis—Inflammation of the meninges.
Meningo-—Prefix meaning relating to the meninges.
Meno-—Prefix meaning relating to the menses.
Menorrhagia—Profuse or excessive menstruation.
Menti—Chin.
Mero-—Prefix meaning part.
Mesenteric—Relating to fold of membrane which suspends and holds small intestine.
Meta-—Prefix signifying over, beyond, among, change or transformation, metabolism. Growth of body.
Metapophyses—Processes which project backward from the superior articular processes of the lumbar vertebræ.
Metritis—Inflammation of uterus.
Metro-—Prefix meaning relating to the uterus.
Micro-—Prefix signifying minute.
Micromegaly—Smallness and immaturity of parts.
Micturition—Act of voiding urine.
Mid-—Prefix meaning middle, also with.
Migraine—Sick headache; bilious headache.
Mollities Ossium—Softening of bones accompanied by compression.
Minimus—Smallest.

Misplacement—Out of its proper place.

Mon- —Prefix denoting one or single.

Monoplegia—Paralysis of a single limb.

Morbid—Diseased.

Morphology—Science of form and structure of organism.

Monstrosity—Irregular or abnormal form or development.

Muco- —Prefix meaning pertaining to mucus.

Mucous—Relating to mucus.

Mucus—The moist covering of the mucous membrane surface.
Animal mucilage.

Multi- —Prefix meaning many.

Multipara—Woman who has born several children.

Musculo- —Prefix signifying relating to the muscles.

Myalgia—Pain in muscle.

Myasthenia—Muscular debility.

Myelitis—Inflammation of spinal cord.

Myco- —Prefix meaning fungus or fungoid or mucus.

Myo- —Prefix signifying pertaining to muscle.

Myocarditis—Inflammation of muscular tissue of heart.

Myositis—Inflammation of muscle tissue.

Myositis Ossificans—Ossification of fat and muscles.

Myositis Ossificans Progressiva—Progressive ossification of fat and muscles.

Myxedema—A disease with mucous-like dropsy.

Myxo- —Prefix meaning relating to mucus or mucoid.

Narco- —Prefix meaning relating to narcosis, numbness or stupor.

Narcotic—Nerve poison. An agent which produces profound sleep.

Nasi—Nose.

Nasitis—Inflammation of the nose.

Naso- —Prefix denoting connection with or relation to the nose

Nausea—Inclination to vomit.

Nearthrosis—New or false joints.

Necro- —Prefix signifying death.

Necrosis—Local death: mortification.

Neo- —Prefix meaning new.

Neonatal—Relating to the period immediately following birth.

Neoplasm—New formation of bone, tissue product of morbid action.

Nephritis—Inflammation of the kidney.

Nephro- —Prefix meaning pertaining to the kidney.

Nephroptosis—Prolapse of the kidney.

Neural—Relating to any part of the nervous system.

Neurapophyses—(plural.) Spinous processes.

Neurapophysis—(singular.) Spinous process.

Neurasthenia—Nervous exhaustion.

Neuritis—Inflammation of nerve.

Neuro- —Prefix signifying connection with or relation to a nerve.

Neurodynia—Pain in nerve.

- Neuralgia*—Pain in nerve.
Neurosis—Name for diseases of nervous system.
Neurotic—Relating to the nervous system. Nerves.
Nevus—Birth-mark.
Non—Prefix denoting negation.
Nares—Nostril.
Nodes—Small tumors. Knots.
Nodosity—Having enlargements like tumors. Small knot-like swelling or growth.
Nodular—Having small tumors, knots.
Nodulous—Relating to nodules.
Noso- —Prefix signifying disease.
Nostalgia—Home-sickness.
Nucleo- —A prefix relating to a nucleus.
Nullipara—A woman who has not brought forth children.
Ob- —Prefix signifying on, against, in front of, or toward.
Obesity—Excessive fat.
Obsession—Possessed of demons.
Obstetrics—Science of care of women during pregnancy and childbirth.
Occipito- —Prefix signifying connection with or relation to the occipital bone or the occiput.
Occlude—To shut up. To close.
Ocular—Of or belonging to the eye.
Oculo- —Prefix pertaining to the eye.
Octo- —Prefix signifying reference to the number eight.
Odonto- —Prefix pertaining to a tooth.
Odontoid—Toothlike.
-odyne—Suffix denoting pain.
-oid—Suffix denoting likeness or resemblance.
Oligo- —Prefix meaning few or little.
Oma—Termination signifying a new growth or tumor.
Omo- —Prefix signifying connection with or relation to the scapula or shoulder.
Omphalo- —Prefix signifying relation to the umbilicus.
Oophor- —Prefix denoting the ovary.
Ophthalm- —Prefix signifying relation to the eye.
Ophthalmoplegia—Paralysis of ocular muscle.
-opia—Suffix denoting connection with or relation to the eye.
Opisthotonos—A spasm in which the spine is bent backward, the body resting on the head and the heels.
-opsia—Suffix denoting connection with or relation to the eye.
Optic—Relating to vision or to the eye.
Orchi- —Prefix signifying relation to or connection with testicle.
Orchitis—Inflammation of testicle.
Organs—Any part of the body exercising a specific function.
Orificial—Relating to an opening.
Oris—Mouth.
Ortho- —Prefix signifying straight, normal or true.

Orthopedia—The prevention and correction of deformities, especially in children.

Orthopedic Surgery—The surgery of deformities.

Orthopedic—Science of deformity.

Os—Bone—*Ossis*, gen. *Ossa* (plural). *Os aris*. Gen. Mouth, *Ora* (plural).

Os Coxae—Innominate bone.

Osmosis—Phenomenon of the passage of fluids through a membrane.

Ossa Innominata—(plural). The hip bones.

Os Innominatum—(singular.) Hip bone.

Osseous—Resembling bone.

Ossicles—(singular.) Small bones of the ear.

Ossific—Bone forming.

Ossification—Formation of bone.

Osteitis—Inflammation of the bone.

Osteo-—Prefix signifying connection with or relation to bone.

Osteocancer or Osteocarcinoma—Cancer of bone.

Osteitis—Inflammation of bone.

Osteitis Condensing—Deposit of bone in medullary cavity, caused by inflammation.

Osteitis Deformans—Inflammation of bone in which bone becomes twisted, deformed, e.g., articular osteitis. Rheumatoid arthritis.

Osteoarthritis—Inflammation of bone with swelling.

Osteoarthrotomy—Cutting into a bone joint.

Osteoblast—Osteal cells aiding in formation of osseous tissue.

Osteocampsia—Curvature brought on by osteomalacia.

Osteocephaloma—An encephaloid tumor or bone.

Osteodiastasis—Separation of epiphysis and shaft.

Osteogyrus—Convolutions of bone.

Osteoid—Resembling bone.

Osteological—Pertaining to osteology, science of structure and function of bones.

Osteolysis—Death of bone. Hospital gangrene.

Osteomalacia—Softening of bones on account of loss of earthy matter.

Osteomalacosis—Mollities ossium. Softening of bones.

Osteomyelitis—Inflammation of the marrow of bone Medullitis. Compare Myelitis.

Osteneoplasm—New formation of bone.

Osteopalinclasis—Breaking of badly united bone, refracture.

Osteoparectasis—Abnormal lengthening of bone.

Osteophyte—Bone tumor.

Osteopsathyrosis—Fragilitas assium. Brittleness of bone attended frequently with spontaneous fracture.

Osteosclerosis—Thickening of bone with condensation.

Osteosis—Ossification.

Osteospongiosis—Spongy condition of bone.

Osteotomy—Dissecting of bones.

- Otalgia*—Earache.
Otic—Relation to the ear.
Otitis—Inflammation of ear.
Oto-—Prefix signifying connection with or relation to the ear.
-otomy—Suffix denoting to cut out.
Ostosis—Ossification. Turning to bone.
Osteoma—Bony tumor.
Ovario-—Prefix signifying relation to the ovary.
Ovaritis—Inflammation of ovary.
Palato-—Prefix signifying relation to the palate.
Palliative—Mode of treatment which only relieves a disease without curing it.
Pallor—Paleness.
Palpation—Examination by digital exploration.
Palsy—Paralysis.
Pan-—Prefix signifying all, every, the whole of anything.
Pandemic—World-wide epidemic.
Pantophobia—Groundless fear of everything.
Papilloma—Papillary tumor.
Para-—Prefix signifying beyond, beside, near or the opposite of.
Parablepsis—False vision.
Parachromatism—Color blindness.
Paracystic—Near or about the bladder.
Paracytic—Situated between cells.
Paraplegia—Paralysis of legs.
Parapophysis—Lower transverse process in animals, not found in man.
Parenchyma—Working part of an organ.
Parenchymatous—Pertaining to parenchyma.
Paresis—Incomplete paralysis affecting motion, but not sensation.
Paresthesia—Abnormal or perverted sensation.
Parosmia—Perverted smell.
Parotitis—Inflammation of parotid gland: mumps.
Parorexia—Perverted appetite.
Paroxysm—A spasm or fit; a convulsion. A sudden onset of a disease.
Parvus—Small.
Passive—At rest. Not active.
Pathology—Science of diseases. The sum of the morbid changes in any disease.
Pathological—Pertaining to pathology, the science of disease.
Pectus—Sternum: thorax.
Pedicle—Foot-like process.
Pediculosis—Lousy disease.
Pediculus—Louse.
Pedunculated—Resembling stems.
Pellagra—Corn poisoning. Italian leprosy.
Percussion—Examination by repeated tapping.
Peri-—Prefix signifying around or surrounding.
Pericarditis—Inflammation of membranous sac covering heart

- Pericardium*—Membranous sac around heart.
- Perichonritis*—Inflammation of the covering of cartilage.
- Perichondrium*—Membrane around cartilage.
- Periostitis*—Inflammation of the periosteum.
- Periostosis*—Enlargement of bone by inflammation.
- Periosteum*—Fibrous membrane covering bone.
- Periphlebitis*—Inflammation of outer coat of a vein.
- Peristalsis*—Worklike motion.
- Pernicious*—Malignant. Destructive. Harmful.
- Pertussis*—Whooping cough.
- Petechia*—Small spots similar in shape and color to flea bites.
- Pharyngitis*—Inflammation of pharynx.
- Pharyngo-* —Prefix meaning pertaining to the pharynx.
- Phleb-* —Prefix meaning vein.
- Phobia*—Any morbid fear or dread.
- Phono-* —Prefix meaning pertaining to the voice or to sound.
- Photo-* —Prefix meaning pertaining to the light.
- Photophobia*—Intolerance of eyes to light. Morbid fear of light.
- Phrenic*—1. Relating to the diaphragm. 2. Relating to the mind.
- Phrenoplegia*—Paralysis of diaphragm: sudden mental failure.
- Phrenitis*—Inflammation of brain: delirium.
- Phreno-* —Prefix signifying pertaining either to the mind or to the diaphragm.
- Phrenology*—Science of character reading.
- Phthisis*—Consumption.
- Physician*—One who has been licensed to practice medicine.
- Physics*—Science and art of medicine.
- Physiology*—Science of the functions of the body.
- Pica*—Morbid appetite for unusual articles of food, or substances not fit for food.
- Pigmentation*—Coloration.
- Pilastered*—Fluted or concave.
- Placenta*—Soft spongy vascular body, adherent to uterus and connected with foetus by the umbilical cord.
- Platy-* —Prefix signifying flat.
- Platycnemia*—Breadth and flatness of tibia.
- Platycnemism*—Lateral flatness of tibia.
- Plethora*—Superabundance of blood, either general or local.
- Plethoric*—Relating to plethora.
- Pleura*—Serous membrane enveloping the lung.
- Pleurisy*—Inflammation of the pleura.
- Pleuritis*—Inflammation of serous membrane enveloping lungs.
- Pleuro-* —Prefix signifying connection with the pleura or with a side or rib.
- Plaurodynia*—Pain in intercostal muscles.
- Pleurothotonos*—Tonic muscular spasm curving the body to one side.
- Plexus*—A network of nerves or veins.
- Pneumato-* —Prefix signifying pertaining to air, gas or breath.
- Pneumo-*—Refers to lung.

- Pneumonia*—Inflammation of the lungs.
Pneumono- —Prefix meaning pertaining to the lungs.
Polished—Glossy.
Poly—Many.
Polyarthritis—Simultaneous inflammation of many joints.
Polydipsia—Excessive thirst.
Polymorphosis—Having many forms.
Polyuria—Excessive secretion of urine.
Polyypus—A pedunculated swelling or outgrowth from a mucous membrane.
Post—After or behind.
Postconvulsive—Occurring after a convulsion.
Postepileptic—Occurring after an epileptic seizure.
Posticus—Posterior.
Postmortem—Occurring after death.
Postuterine—Posterior to the uterus.
Postzygapophysis—(Singular.) A posterior zygapophysis. Inferior articular process of a vertebra.
Postzygapophyses—(Plural.)
Pott's Disease—Tuberculosis of spine.
Pre- —Prefix signifying before.
Preaortic—Situated in front of aorta.
Precordium—Region in front of heart and stomach.
Predisposition—A natural tendency toward a disease.
Premonitory—That which precedes or foretells.
Prenatal—Previous to birth.
Prezygapophysis—(Singular.) An inferior zygapophysis. Inferior articular process of a vertebra.
Prezygapophyses—(Plural.)
Primipara—Woman pregnant with first child.
Primus—First.
Pro- —Prefix, denoting before or forward.
Prodrome—Symptoms in anticipation of disease.
Profundus—Profound, deep.
Prognosis—Prediction of the course and ending of a disease.
Prolapse—A falling down of a part.
Prone—Lying upon the face.
Prophylaxis—Prevention of a disease.
Proximal—Nearest the body.
Pruritus—Itching.
Pseudo- —Prefix, meaning false.
Pseudoarthrosis—(Singular.) False joint.
Pseudoarthroses—(Plural.)
Pseudocyesis—False pregnancy.
Psoas—Name applied to set of muscles in lumbar region.
Psycho- —Prefix, signifying connection with the mind.
Pterygo- —Prefix, signifying connection with or relating to the pterygoid process.
Ptosis—Prolapsus; falling of a part; drooping of upper eyelid from paralysis.

- Pubo-* —Prefix signifying relation to the pubes.
- Puerperal*—Relating to parturition and its sequence.
- Purulent*—Having character of pus.
- Pustule*—Small purulent elevation of cuticle with an inflamed base.
- Putrefaction*—Decomposition experienced by animal matter when deprived of life.
- Pyelo-* —Prefix meaning the relation to the kidney or to the pelvis of the kidney.
- Pyemia*—Pus in the blood.
- Pyo-* —Prefix, denoting an accumulation of pus.
- Pyretic*—Pertaining to fever.
- Pyrexia*—Fever.
- Pyro-* —Prefix, denoting fire or heat.
- Pyrophobia*—Morbid fear of fire.
- Pyrosis*—Water brash: heart burn.
- Quadratus*—Square or four sides.
- Quadri-* —Prefix, denoting four or four times.
- Quinsy*—Suppurative tonsillitis.
- Rabies*—Fatal disease of animals.
- Racemose*—In clusters like grapes.
- Rachi-* —Prefix, denoting relating to the spine.
- Rachitis*—Constitutional disease of childhood marked by lack of earthy matter in bones.
- Radiograph*—Photograph taken by means of some form of penetrating rays.
- Rale*—Noise produced by air in passing through secretions in air passages.
- Rarefaction*—Expansion.
- Re-* —Prefix, denoting back or again.
- Recto-* —Prefix, relating to the rectum.
- Reflux*—A return flow.
- Regressive*—Passing backward; abating.
- Regurgitation*—Backward flow.
- Relapse*—Return of a disease during or shortly after convalescence.
- Remittent*—Alternately abating and returning.
- Renal*—Refers to kidney.
- Reniform*—Kidney shaped.
- Resonance*—The sound obtained on percussing a part which can vibrate.
- Respiration*—Function whereby the blood is oxygenated and waste is thrown off. The process of breathing.
- Restoration*—Recovery of health.
- Retractile*—Capable of being drawn back.
- Retro-* —Prefix, denoting back, backward or behind.
- Reynaud's Disease*—Peculiar disease marked by coldness and whiteness of fingers, toes and tip of nose.
- Rhachi-* —Prefix relating to the spine.

Rhachio—Prefix, denoting connection with or relation to the spine.

Rheumato—Prefix, relating to rheumatism.

Rheumo—Prefix, denoting relating to rheumatism.

Rhin-(o)—Prefix, pertaining to the nose.

Rhinitis—Inflammation of the nasal mucous membrane.

Rickets—Disease characterized by softening of long bones.

Rigidity—Great stiffness.

Rigor mortis—Rigidity after death.

Rubella—False, French or German measles.

Rubeola—Measles.

Saccharine—Of the nature of or containing sugar.

Sacra—Plural of sacrum.

Sacro—Prefix, denoting pertaining to the sacrum.

Sacrum—Singular of sacra. Posterior bone of pelvis.

Saline—Salty.

Salpingitis—Inflammation of the fallopian tube.

Salpingo—Prefix, denoting relation to the fallopian or eustachian tube.

Sapro—Prefix, denoting decay, putridity, etc.

Sarcitis—Inflammation of muscle tissue.

Sarco—Prefix, denoting composed of or pertaining to flesh.

Sarcocele—Any fleshy tumor of the testicle.

Sarcolemma—Sheath surrounding the fibrils of muscle forming a fiber.

Scapula—Singular of scapulæ. Shoulder blade.

Scapulæ—Plural of scapula.

Sclero—Prefix, meaning hard.

Sclerosed—That which is thickened with condensation. Affected with sclerosis.

Sclerosis—Hardening.

Scoliosis—Lateral curvature of the spine.

-scope—Suffix, denoting to see or examine; usually forming part of name of an instrument.

Sebaceous—Pertaining to, or secreting, fat.

Secundus—Second.

Semi—Prefix, denoting half.

Senile—Pertaining to weakness of old age.

Sepsis—Poisoning of the system by the introduction of pathogenic organisms into the blood. Putrefaction.

Septic—Relating to or caused by sepsis.

Septicemia—Blood poisoning.

Septum—Dividing wall.

Sequestra—(Plural.) Piece of dead bone. (Sequestrum, singular.)

Sero—Prefix, denoting relation to serum or serous.

Serpiginous—Creeping from one place to another.

Serratus—Saw-like.

Sigmoid—Shaped like the letter S.

Sinister—Left.

- Sinistro*—Prefix denoting left or toward the left side.
- Somatotomy*—Anatomy, somatology.
- Somnambulism*—Sleep walking.
- Somnolence*—A state between sleeping and waking. Drowsiness.
- Soporific*—Causing sleep.
- Sordes*—Filth upon the teeth.
- Sauffle*—A murmuring or blowing sound.
- Spasmo*—Prefix, pertaining to a spasm.
- Specific*—Special. Relating to a species.
- Speculum*—An instrument for enlarging an opening, bringing parts into view.
- Sphacelus*—Mortification; gangrene.
- Spheno*—Prefix, relating to the sphenoid bone.
- Sphygmie*—Relating to the pulse.
- Sphygmograph*—Instrument for recording pulse beats.
- Spina bifida*—Congenital defect in posterior wall of spinal canal, with protrusion of some of its contents.
- Spina ventosa*—Osteoid cancer.
- Spine*—Thornlike process. The twenty-four movable vertebræ.
- Spinograph*—X-ray picture of the spine.
- Splanchno*—Prefix, relating to the viscera.
- Splanchnology*—Science of nature and function of viscera.
- Splanchnoptosis*—Prolapse of the viscera.
- Splen*—Prefix, relating to the spleen.
- Splenoptosis*—Prolapse of the spleen.
- Spondyl*—Prefix, denoting pertaining to a vertebra.
- Spondylitis*—Inflammation of one or more of the vertebræ.
- Spondylitis-deformans*—Vertebræ ankylosed by inflammation. Deformity produced by ossification of cartilage in inflammation of vertebræ.
- Spondylolisthesis*—Body of lumbar displaced.
- Sprain*—A violent straining of ligaments.
- Sputum*—Secretion ejected from the mouth.
- Squamous*—Scaly.
- Static*—At rest. Not in action.
- Steatoma*—Fatty tumor.
- Steno*—Prefix, meaning narrow or constricted.
- Stenosis*—Narrowness or constriction of any canal. A stricture.
- Sterno*—Plural of sternum.
- Sterno*—Prefix denoting connection with the sternum.
- Sternum*—Singular of sterna. Breast bone.
- Stetho*—Prefix, pertaining to the chest.
- Stethoscope*—An instrument for listening to chest sounds.
- Stomatitis*—Inflammation of mucous membrane of mouth.
- Stomato*—Prefix pertaining to the mouth.
- Strabismus*—Cross eyes.
- Strain*—Injury from overuse.
- Stupor*—Diminished activities of mental faculties.
- Style*—Prefix, pertaining to the styloid process of the temporal bone.

Styloid—Pen-shaped.

Sub-—Prefix, denoting under or beneath.

Sublimis—Name given certain muscles more superficial than their kindred muscles.

Subluxation—Displacement of two or more bones whose articular surfaces, in part, lose their natural connection. A condition wherein two articular surfaces have lost their juxtaposition.

Succussion—Examination for existence of fluids in a cavity by giving the body one or more slight shakes.

Sudamina—Sweat vesicles.

Sulcus—Groove or fissure.

Super-—Prefix, denoting above, upon, or excessive.

Superficial—On or near the surface.

Supernumerary—In excess of the normal number.

Supersecretion—Excessive secretion.

Supine—Lying upon the back.

Suppuration—Formation or secretion of pus.

Supra-—Prefix, denoting above or upon.

Supracostal—Above the ribs.

Supramaxilla—Upper jaw-bone.

Suprapelvic—Above the pelvis.

Suprascapular—Above the scapula.

Susceptible—Liable to be affected by morbid influences.

Surgeon—One who devotes himself to operative measures.

Surgery—That part of the healing art relating to operative measures.

Sym or *syn-*—Prefix, denoting with or together.

Symphysis—Close union or junction of bones.

Sympiesis—Squeezing together of parts.

Symptomatology—Science of symptoms.

Synarthrosis—Stiff articulation.

Synarthroses—Stiff articulations.

Synchondrosis—Articulation with cartilage.

Syncope—Fainting.

Synostosis—Abnormal union of bones.

Synostosis—Synostosis.

Synovia—Joint oil.

Systole—Period of contraction of heart.

Tabes—Emaciation of the whole body.

Tabes dorsalis—Locomotor ataxia.

Tactile—Relating to touch.

Tachy-—Prefix, meaning swift.

Tachycardia—Abnormal rapidity of heart action.

Tænia—A flat band.

Talipes—Club foot.

Taxis—Reduction of hernia by manipulation.

Temporo-—Prefix, denoting the temple.

Teno-—Prefix, pertaining to a tendon.

Teratoma—Tumor composed of tissues not present in normal structure of the part.

Teres—Round and smooth.

Terticus—Third.

Tetano-—Prefix, meaning relating to tetanus.

Tetanus—Spasm with rigidity of muscles.

Therapeutics—That part of medicine which deals with treatment of disease.

Therapy—Treatment of disease.

Thrombosis—Formation of a thrombus.

Thrombus—Blood clot in vessel causing an obstruction.

Thyro-—Prefix, denoting relationship to the thyroid gland.

Tibio-—Prefix, pertaining to the tibia.

Tic douloureux—Tri-facial neuralgia.

Tinnitus—Ringing in the ears.

Tonic spasm—Denotes constant rigidity.

Tonsillitis—Inflammation of tonsil.

Topo-—Prefix, pertaining to a locality.

Torsion—State of being twisted, or of twisting. Distortion.

Torticollis—Stiff neck; wry-neck.

Torticollis spastica—Causes head to be held permanently to one side.

Tox- toxico-—Prefixes, denoting poisonous, or caused by poison.

Toxic—Poisonous.

Toxicology—Science of poisons.

Toxicophobia—Morbid fear of poisons.

Trochlear—Pully-like.

Trophic—Relating to nourishment.

Trabiculæ—Prolongations of fibrous membranes.

Trachelo-—Prefix, pertaining to the neck.

Tracheo-—Prefix, denoting connection with or relation to the trachea.

Trachoma—Granular eyelid.

Trans-—Prefix, denoting through or across.

Trauma—A wound caused by external violence.

Tri-—Prefix, denoting three.

Trismus—Lockjaw.

Tubercle—A small prominence or projection from the surface of bone.

Tuberosity—A process of bone giving attachment to muscles or ligaments.

Tubo-—Prefix, relating to a tube.

Tumor—Circumscribed enlargement of a part due to morbid growth.

Tympanites—Gaseous distension of the abdomen.

Tympanitis—Inflammation of tympanum of ear. Otitis media.

Typhlitis—Inflammation of the cecum.

Typhlo-—Prefix, relating to cecum.

Ultra-—Prefix, denoting excess.

Uni-—Prefix, denoting one.

Unilateral—Relating to one side.

Uremia—Urine in the blood.

- Urtero*—Prefix, relating to the ureter.
Urino—Prefix, relating to the urine.
Urinalysis—Analysis of the urine.
Uro—Prefix, relating to urine or uric acid.
Urosis—Any disease of the urinary organs.
Urticaria—Nettlerash; hives.
Utero—Prefix, relating to the uterus.
Vagino—Prefix, relating to the vagina.
Varicella—Chickenpox.
Varicocele—Dilatation of the veins of the scrotum and spermatic cord.
Variola—Smallpox.
Vas—A vessel.
Vaso—Prefix, pertaining to a vessel.
Venom—Poison secreted by a reptile.
Ventrad—Toward the front.
Ventral—Relating to the front of the body.
Ventro—Prefix, pertaining to the belly.
Vertebro—Prefix, pertaining to a vertebra.
Vertex—Highest part of crown.
Vertigo—Dizziness.
Vesico—Prefix pertaining to the bladder.
Veta—Mountain sickness.
Viscera—Internal organs.
Vimineous aborescent—Like stems and trees.
Vimineous aborescent exostosis osseous—Deposit in the shape of trees.
Viscero—Prefix, pertaining to the viscera.
Viscus—Any internal organ of the body.
Volvulus—Obstruction due to a kink or twisting of the intestine.
Voracious—Having an insatiable appetite.
Vulvo—Prefix, pertaining to the vulva.
Wen—Sebaceous tumor.
Xantho—Prefix, meaning yellow.
Xeno—Prefix, meaning strange or foreign.
Xero—Prefix, meaning dry.
Xeroderma—Dry skin.
Zoo—Prefix, meaning animal or pertaining to an animal.
Zoophobia—Morbid fear of an animal.
Zygapophysis—One of the four articular processes.

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